STATE OF MINNESOTA DISTRICT COURT

COUNTY OF RAMSEY SECOND JUDICIAL DISTRICT

- -

The State of Minnesota,
by Hubert H. Humphrey, III,
its attorney general,
and
Blue Cross and Blue Shield
of Minnesota,

Plaintiffs,

vs. File No. C1-94-8565

Philip Morris Incorporated, R.J.
Reynolds Tobacco Company, Brown
& Williamson Tobacco Corporation,
B.A.T. Industries P.L.C., Lorillard
Tobacco Company, The American
Tobacco Company, Liggett Group, Inc.,
The Council for Tobacco Research-U.S.A.,
Inc., and The Tobacco Institute, Inc.,

Defendants.

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DEPOSITION OF W. KIP VISCUSI, Ph.D.

Volume II, Pages 261 - 421

(The following is the continued Deposition of W. KIP VISCUSI, Ph.D., taken pursuant to Notice of Taking Deposition, at the offices of Dorsey & Whitney, Attorneys at Law, 220 South Sixth Street, Minneapolis, Minnesota, on September 18, 1997, commencing at approximately 8:33 o'clock a.m.)

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P R O C E E D I N G S

(Witness previously sworn.)

W. KIP VISCUSI, Ph.D.,

called as a witness, being first duly sworn, was examined and testified as follows:

ADVERSE EXAMINATION (cont'd.)

BY MR. SILBERFELD:

Q. Morning.

A. Morning.

Q. Returning to the cost calculation you did which is part of Exhibit 3812 that we spoke about yesterday, does this analysis, in whole or in part, apply to the claim of Blue Cross\Blue Shield of Minnesota?

MR. ATKESON: Objection, calls for a legal conclusion.

Q. From an economic or cost standpoint.

A. I don't know what Blue Cross\Blue Shield's claim is. This analysis is the cost to the state, this particular chart.

Q. Okay. Have you done any analysis of the claim of Blue Cross\Blue Shield of Minnesota in any respect?

A. I don't know what the claim of Blue Cross\Blue

Shield is.

Q. That's not the question. The question is: Have you done any analysis of it?

A. I can't -- I don't know if I can -- if my analysis covers it until I know what their claim is.

Q. Well have you spent one minute of time thinking about or analyzing any aspect of the claim of Blue Cross\Blue Shield of Minnesota?

A. No.

Q. Do you have an understanding as to what Blue Cross\Blue Shield of Minnesota is?

A. I was formerly insured by Blue Cross\Blue Shield --

Q. Of Minnesota?

A. -- myself. Not of Minnesota, but of North Carolina. I assume it's the Minnesota analog of it, but I don't know exactly what they do.

Q. What do you understand it to be?

A. It's a health insurance company.

Q. Looking at Exhibit 3812, and specifically the components of it that in your estimation from the state model operate as deducts, if you will, does Blue Cross\Blue Shield of Minnesota pay for nursing home care as far as you know?

A. I don't know.

Q. Would the pension effect that you describe in Exhibit 3812 apply in any respect to Blue Cross\Blue Shield of Minnesota?

A. To employees with pensions, so to the extent that they have employees it would apply just like to the extent the states have employees.

Q. So to the extent that Blue Cross's employees die early, Blue Cross\Blue Shield would not pay out pension benefits to those employees. That's the idea?

A. If that's the way their pension system works.

Q. Those same employees would have to be insured by Blue Cross\Blue Shield, those same smokers would have to be insured by Blue Cross\Blue Shield in order for the pension savings to operate as an offset against the medical care costs associated with smoking that Blue Cross\Blue Shield paid for; right?

A. I would think so.

Q. How about the "taxes on earnings" column, does that have any application to Blue Cross\Blue Shield of Minnesota?

A. Well if I were to count the pensions for some reason for Blue Cross\Blue Shield, I'd also want to count the contributions they did not make to the pensions.

Q. Assume, if you will, that Blue Cross\Blue Shield's claim does not involve healthcare benefits for its own employees, but rather for people who were insured by Blue Cross\Blue Shield. In that event, the pension effect that you describe in Exhibit 3812 wouldn't apply at all, would it?

A. I wouldn't think so.

Q. And the same is true of the taxes-on-earnings effect?

A. Yes.

Q. And to the extent that the State of Minnesota's claim is for people other than its own employees, the pension effect would not apply, would it?

A. Well they're still getting the benefit. We're asking from the standpoint of the state in these calculations what are their costs but for cigarette smoking, and from that standpoint, regardless of how you frame the claim, you want to ask what are the costs to the state, the net costs to the state that result from the particular activity.

Q. Putting the whole context of Medicaid costs aside, when an individual dies in the State of Minnesota and he's not employed by the State of Minnesota, he's employed by Dorsey & Whitney, does the State of Minnesota contribute some pension

benefit that would have been paid had the person not died?

A. No. Not to that person.

Q. Okay. To a state employee.

A. Right.

Q. That's the concept.

A. That's correct.

Q. And do you have figures somewhere in the model as to what number of people in the State of Minnesota between 1978 and 1996 that got healthcare benefits related to smoking were state employees and private employees?

A. No.

Q. Is there an adjustment in the model that compensates or accounts for that fact?

A. No.

Q. Describe if you will, then, how you differentiate, if at all, between the pension benefits allocable to state employees and the pension benefits allocable to private firm employees.

A. The model only looks at pension benefits for state employees, so if there were no state employees, the pension benefit term is zero. So it's based on the number of employees, the pension benefit levels for these employees, and if neither of these things

kicks in in a positive amount, that number is not positive.

Q. Okay. Which leads me back to something we spoke about off the record. I had made a request yesterday for the disk of the model that produced these calculations. Have you had a chance to think about that overnight?

MR. ATKESON: Well I've told you off the record that we're not going to produce it.

MR. SILBERFELD: And the reason is?

MR. ATKESON: He's not designated as an expert on that, this is his work, it's -- we don't have any control over it. It's just as if you'd asked for backup work for another one of his articles that's on that CV, and if he doesn't want to give it to us without somebody paying for it, we're not willing to pay for it and so the answer is no.

MR. SILBERFELD: Okay. So it's not your refusal; right? It's his refusal.

MR. ATKESON: Well he's not going to give it to us without us paying for it.

MR. SILBERFELD: That's the point.

MR. ATKESON: And we're not willing to pay for it, so the answer is we're not going to give it to you.

BY MR. SILBERFELD:

Q. Okay. What's the charge for it?

A. I haven't thought of a charge.

MR. ATKESON: Let me just also say I don't think it's relevant at all, it's not called for on the judge's order and if you and I disagree on that we can argue with the judge, but having a legal argument with him as to whether or not it's relevant is not going to get us anywhere.

MR. SILBERFELD: I don't want do have a legal argument, I want to have a factual discussion with him.

Q. What's the charge for it?

A. I haven't set a price for it.

Q. Well, give me a range.

A. A hundred thousand dollars. It's about 25 days' work charged out at my daily rate.

MR. SILBERFELD: Well, we'll take it up in some fashion.

MR. ATKESON: Okay.

MR. SILBERFELD: And probably the most efficient way to do it is rather than call the court and have the court take this up out of order, even if we prevail on that that's not going to produce the disk here today so I don't see any urgency in doing

this today. We'll probably take it up in the normal course of some discovery request.

MR. ATKESON: That's up to you. I think you need to figure out why it's relevant.

MR. SILBERFELD: Well I know why it's relevant. I think I put that out for you to consider. I think I did that yesterday.

MR. ATKESON: And I think we've explained to you why it's not relevant.

MR. SILBERFELD: I know. We have a disagreement about that. I hope you don't misapprehend why I think it's relevant. I hope you understand why I think it's relevant. It has to do with the entire issue of methodology, that's what it has to do with. And whether --

MR. ATKESON: It has nothing to do with the methodology. The methodology he's talking about in this is from a conceptual standpoint how do you analyze it, okay. It has nothing to do with actual numbers.

MR. SILBERFELD: And you're suggesting to me that we're not entitled to test the validity of the method by looking at actual examples that this man has done for the State of Minnesota. That's what you're telling me.

MR. ATKESON: This is not anything he did for the State of Minnesota. This is an article he did on his own just coming up with national numbers for all 50 constituents. He did not do this for Minnesota or anything else.

MR. SILBERFELD: Including the State of Minnesota.

MR. ATKESON: Well it just happens to be one of the 50 states.

MR. SILBERFELD: Correct, it is.

MR. ATKESON: But you're going to get 12 hours with Professor Foster, and he has come up with specific numbers for the State of Minnesota and he's going to be the one testifying in trial on that issue.

MR. SILBERFELD: We're back to filleting the opinions. Okay. Let's move on.

BY MR. SILBERFELD:

Q. Yesterday you were kind enough to have faxed to us your Alarmist Decisions paper. Do you subscribe to the view that a basic tenet in economics is that more information is better?

A. That's the reference point that people generally accept, and the whole point of the article is that more information can actually have a bad effect so

that it's not necessarily better. So the point of the article is to basically undermine this tenet.

Q. So as you sit here today, do you believe that more information is not necessarily better?

A. Certainly, because there's problems with information overload, to name but one.

Q. Has it been well understood in the economic and the psychology literature, as far as you know, that conflicting information presents perceptual problems for the hearer?

A. I don't think it's been well understood. I think that's one of the things that I pointed out in this article, that people don't necessarily deal rationally with conflicting information. I'm not aware of the literature documenting this before this paper.

Q. Okay. You think this is the first paper in the world literature on this subject?

A. I don't know if it's the first paper, but it's the first paper that I've written, and I've never seen a formal test of that.

Q. You say on page 2, "one would expect people to have substantial difficulty in making reliable judgements in the instance of conflicting risk information."

A. Yes.
Q. You believe that.
A. Yes.
Q. So that in order to avoid that problem, would it be useful for government and industry to work together to provide the maximum amount of consistent information possible about a particular risk?
A. Lots of times there is not a con -- scientific consensus, and the point of this article is to try to figure out what happens when people have to process this conflicting information. And they certainly have problems doing it, but their problems are of a systematic type and we can say something quite strong about the character of the biases that result.
Q. And the thing that can be said is what?
A. In situations of conflicting risk information people gravitate to the high-risk estimate, so it's the worst-case scenario that dominates, whereas if we were to have some sort of consensus judgment that averaged the two risk assessments you would get people thinking that the risk was lower than they do in situations in which there is a debate about the risk.
Q. Did the hypothetical example that you used in the survey done in the Alarmist Decisions paper test

for whether risk perceptions would affect behavior, or just the perception of the risk?

A. I don't recall whether this particular survey analyzed the behavioral -- subsequent behavioral linkage.

Q. Would you like to look at it?

A. I don't have the whole survey so --

Q. Oh.

A. -- that's one question that I wrote up, but we have other surveys that do look at behavior and we've shown that risk beliefs certainly affect behavioral intentions, and that's about all you can test in a survey where you hit people at a point in time in this manner.

Q. Have you done any testing to see whether risk beliefs, in addition to affecting behavioral intent, affect behavior?

A. We've done corroborative studies of our kinds of surveys for insecticides and household chemicals where we were able to show that the same kinds of affects you get with risk perceptions and risk perceptions linked to hypothetical behavior are mirrored almost exactly with actual patterns of behavior, and we did this using as reference points hazard warning labels that are currently on products

and seeing how people use these products as compared to risk information we gave them in the survey context.

Q. And you found that perceptions and behavior tracked reasonably well?

A. For our surveys, the perception hypothetical behavior linkage proved to be almost identical to the actual behavior observed in almost all cases. The one exception was a seasonal fluctuation in risk for fleas.

Q. Have you tested that proposition with respect to smoking?

A. Well I have analyzed, with respect to actual smoking behavior, whether reported risk perceptions affect that. That has been tested statistically.

Q. And what have you found?

A. Increase in risk perceptions regarding smoking decreases smoking rates.

Q. Is that a paper that you published?

A. It's a chapter of my book.

Q. Of the Smoking book?

A. That's correct.

Q. In that chapter of the book did you compare and contrast adults and young people?

A. I tested for whether there was a significant

difference between the two in terms of how risk beliefs could affect smoking rates, and I couldn't distinguish any statistically significant difference between how the risk beliefs affected smoking depending on your age.

Q. In terms of risk beliefs generally, does the level of maturity of the individual matter?

A. I found that older people have lower risk perceptions with respect to smoking, so by "maturity" if you mean does a 60 year old have a different risk belief than does a 21 year old, the answer is yes.

Q. And have you compared and contrasted how risk beliefs in certain age groups compare to behavioral intent and then behavior?

A. No.

Q. Has that been done by anybody, to your knowledge?

A. Well I've analyzed risk beliefs and actual behavior, and I've analyzed risk beliefs and behavioral intent each by age group, but I have not done both simultaneously with comparison for my studies.

Q. Have you done it with respect to smoking?

A. Risk beliefs with respect to behavior, yes.

Q. In various age groups.

A. In various age groups.
Q. And that's in the book.
A. That's in the book.
Q. In terms of risk beliefs, have your studies caused you to reach any conclusion as to the effect of advertising on different age groups?
A. No. Not directly.
Q. How about inferentially?
A. I can't think of any major distinctions across age groups that we could make any inferences with respect to other than the fact that young people have a higher risk belief with respect to smoking than do older people, which suggests that the entire set of informational inputs they are receiving, including advertising, has lead them to think that smoking is very risky.
Q. Based on a belief in young people -- And I take it this is reasonably current-day information?
A. 1985.
Q. Okay.
A. 1997.
Q. Last 10 to 12 years.
A. Right.
Q. Based on young people's beliefs that smoking is very risky or at least the belief amongst young

people that it's riskier than is believed by older generations of people, would you expect that higher perception of risk to lower the amount of smoking in that age group?

A. It does. That particular factor does. There are other factors at work, but that one influence does.

Q. What are the other factors at work?

A. The social acceptability of smoking among teenagers, the extent to which this may be viewed as a positive in terms of an act of rebellion. All of these kinds of factors could enter. Fans come and go among teenagers, smoking could be viewed as more "in" than it used to be. That sort of thing.

Q. Anything else?

A. Those are the main influences.

Q. Have you in the course of your study been able to control for any of these factors?

A. Not -- I haven't looked at any of them.

Q. So as you sit here today you can't tell us what -- the impact of any one of these is, much less the combination of them?

A. Much less whether these are more than conjecture. So these are just thoughts of the -- I don't know that any of these is true. I'm just

hypothesizing.

Q. These are sort of exploratory ideas.

A. Yes.

Q. In your judgment, could a model be created or a survey be created to test for the effect of these factors and control for the others?

A. Conceivably, but let's say you hypothesize that MTV is an influence because most rock acts on MTV have cigarettes that they're smoking. You could run an experiment to see who watches MTV and who doesn't watch MTV, but these are different kinds of kids. So it's unclear exactly how you could get a pure handle on all these issues.

Q. We talked yesterday about the difficulty of quitting smoking.

A. Yes.

Q. And without fencing with you about whether that's an addiction or a dependence or whether it's just hard to quit, is it true, based on your work, that the pleasurable effects of smoking have an impact on people's risk perceptions?

A. I don't know that that's the case.

Q. Have you ever looked at that?

A. Smoking status alone does not appear to affect risk perceptions so the causality goes in the other

direction. But I don't know whether the pleasurable effect influences anything because we don't have that data or a good measure of pleasurable effects beyond what would be picked up in whether you smoke or not.

Q. When you say "smoking status," what -- I haven't heard that term before. What does that mean?

A. The fact that I smoke does not affect my risk perceptions, the causality goes in the other direction, risk perceptions determine whether I smoke.

Q. Are risk perceptions among smokers and nonsmokers the same about --

A. No, they're different.

Q. -- smoking?

A. No, they're lower for smokers.

Q. So that smokers have a lower risk perception about smoking than nonsmokers do.

A. That's correct.

Q. And do you believe that part of that difference may be accounted for by the fact that smoking has a pleasurable component to those that smoke?

A. No, because I've tested for that.

Q. Okay. Explain that to me.

A. So you can test empirically for whether smoking affects risk perceptions as opposed to risk

perceptions affecting smoking, and you can reject the hypothesis that smoking affects risk beliefs. So at least overall there's no evidence that this is the case.

Q. What is the paper or article or part of the book that talks about that?

A. Well the strongest evidence is work I'm doing now with the 1997 audits and surveys data.

Q. What is that work?

A. Just statistical analysis of smoking behavior and risk perceptions.

Q. What is it you're doing?

A. Analyzing how the risk-belief responses affect smoking and whether there's a relationship, vice versa.

Q. How are you going about doing that?

A. Essentially testing the endogeneity, E-N-D-O-G-E-N-E-I-T-Y, of risk beliefs within the context of the smoking equation.

Q. What does that mean?

A. Does smoking affect risk beliefs or does risk beliefs just affect smoking?

Q. How are you doing that?

A. Exactly what I say. You run endogeneity tests for whether risk beliefs are driven by smoking within

the context of that equation.

Q. What's an endogeneity test?

A. It's a test for whether the dependent variable, in this case smoking, affects the explanatory variable-risk beliefs.

Q. Is there some part of the survey data from the '97 audits and survey information that you're using to plug into this test formula?

A. Yes, I'm using the smoking responses and the risk belief responses.

Q. Here it is. Can you just tell me which parts of the '97 data you're using to run the endogeneity tests?

A. I forget what our particular instruments are.

Q. What's an instrument?

A. It's a variable used to estimate another variable so that you replace in your equation, let's say, risk perceptions with an estimated version of risk perceptions based on other variables that you observe. So I believe in the case of either smoking or risk beliefs some of the instruments we used are things like whether you owned a PC. So the things that you'd expect would be correlated with one variable but not the other one could serve as valid instruments.

Q. Which ones did you use to make this determination?
A. Some of the things we used had to do with cable TV, whether you owned a personal computer. I don't see the variable list here.
Q. Was it part of the survey data?
A. Yes. The survey is longer than this, so these are just the risk-belief questions.
Q. So we have something less than all of it there, is that the idea?
A. Well you have the statistical summary of the survey results and a table that I prepared looking at the differences by age group, but the survey itself is longer than this. And I'm working with the survey data on an individual basis, I'm not working with these tables.
Q. So we don't have all of it there, is that the short answer?
A. You don't have the whole survey.
Q. Okay. Do you know why not?
A. I didn't give it to you. It's maybe not part of the report prepared by audits and surveys.
MR. ATKESON: You have what he's talking about on the disk, and that's the only form it's in.
MR. SILBERFELD: What disk?

MR. ATKESON: The computer disk. Audits and surveys -- What happened here is that these questions were asked as part of a national survey.

MR. SILBERFELD: Right.

MR. ATKESON: And, you know, lord knows what other questions they asked, somebody else was testing, I don't know, Clorox or something at the time, so there's a whole series of unrelated questions. The written thing you got there is the report that we received from them, okay. In addition they have provided, starting with the state of Mississippi they asked for the disk with all the data on it and --

MR. SILBERFELD: Has that been provided to us?

MR. ATKESON: We provided that to each of the states.

MR. SILBERFELD: Including us?

MR. ATKESON: Including you.

MR. SILBERFELD: Okay.

MR. ATKESON: But we have not been -- I mean, there is no -- at least we have not been provide -- if there's a report that lists -- Let me step back a step.

Each of the people who contracted with audits

and surveys to do this I don't think are aware of who else is asking questions so we're not allowed, I think, to see what other products are being tested or anything else. I think what's on the data disk is demographic information about the people who answered this so you could tell whether they come from the Northwest or Northeast, age, and then as Kip was talking about, whether you own a personal computer or a, you know -- those kinds of things. But that's all we have. And I've also provided you with -- Mississippi asked for all of the papers that audits and surveys had, written material, and I provided that to Minnesota as well.

MR. SILBERFELD: Okay.

BY MR. SILBERFELD:

Q. I want to get back to endogeneity in a minute, but the last two pages of what we have here are prepared by you, sir?

A. I did that. That's the only thing in the report I did.

Q. And what are these two pages?

A. The main point is to track how risk perceptions vary depending on educational background. It's often been suggested by antismoking groups that since the less well educated tend to be smokers and the better

educated are not, that the reason is because of ignorance. And what this document says is that the less well educated, if anything, have higher risk beliefs than do the better educated so that there doesn't appear to be any difference in risk beliefs across age groups that would account for this education difference.

Q. Now since we don't have the material in front of us, I want to get back to this issue of whether smoking depresses risk beliefs or risk beliefs depress smoking. That's the general idea of what we're talking about; right?

A. That's correct.

Q. In order to figure that out, the answer to that question, you look at things like whether people watch cable TV or own a PC?

A. Those variables are used as instruments in estimating risk perceptions to determine whether or not that variable is an -- is endogenous. So it's part of a statistical test, to use other variables outside your system in estimating your model.

Q. Describe to me in sort of hypothetical terms how you determine whether smoking depresses risk beliefs or risk beliefs depress the amount of smoking.

A. Well the big thing is simply to test whether

within the context of the smoking equation the risk perception variable is endogenous, which simply means does smoking, which is the dependent variable, affect the explanatory variable, which is risk perceptions. And there are endogeneity tests that involve the use of other variables in the system to, in effect, construct an estimated value of risk perceptions as part of the endogeneity test.

Q. And you've reached a conclusion about this topic?

A. Yes.

Q. And that conclusion is?

A. Risk perceptions are not endogenous.

Q. So smoking behavior does not affect risk perceptions.

A. That's correct.

Q. It's the reverse.

A. That's right.

Q. Across all age groups.

A. I haven't done it by age group, but I can.

Q. Is this work part of some study you're doing?

A. Yes, it is.

Q. Paper you're writing or what?

A. A paper I'm writing.

Q. It's in progress?

A. In progress.
Q. Has it been submitted to anyone?
A. Not a word has been written. Right now I have a stack of tables.
Q. Does that study in any way account for the effects of nicotine in cigarettes?
A. Well to the extent that smoking status involves consuming nicotine, that would be part of it.
Q. Is that the only way?
A. Yes. I don't have any variable in the survey to account for the nicotine content of what you smoke.
Q. Have you considered using as a variable, efforts to quit by smokers?
A. I'm not sure that's in the survey.
Q. Have you looked?
A. I remember reading the survey about half a year ago. I don't remember seeing a quitting question.
Q. Do you believe, survey work aside, that nicotine in cigarettes affects people's decisions about whether to smoke or continue smoking?
A. Well I think that's a complex question in that people often say, you know, it's just the nicotine that makes me smoke. On the other hand, we can obtain nicotine in other ways, through nicotine patches, nicotine gum, and I think the best thing in

terms of an empirical test is the Premier cigarette, which we had a cigarette with lower minimal risk associated with it yet you could still get the same nicotine effect from a regular cigarette and yet people didn't buy it and they still don't buy the Eclipse. I think what this says is that people actually like to smoke. So it's not just nicotine, people enjoy smoking.

Q. I'm not suggesting for a moment that it's only nicotine, but is nicotine a significant factor in the decision making of smokers about whether to continue the habit?

A. I'm sure it's influential, just like caffeine in coffee makes coffee more attractive to people who like caffeine in coffee.

Q. Would it be important for your analyses if nicotine were in fact addictive?

A. No. I'm analyzing whether smoking is affected by risk beliefs, so that's the scope of my analysis.

Q. Would it be important for your analysis about risk beliefs if there was an addictive component to the smoking behavior? Would that matter at all?

A. I'm analyzing whether risk beliefs affect whether or not you smoke. I view nicotine as something that might affect the sort of black box in

the middle that influences how it happens, but all I'm interested is -- in for the purposes of my study is the starting point risk beliefs and the outcome, and I would view nicotine as an intervening variable that would affect how the process works, but I'm more concerned with the result rather than the process.

Q. You don't believe the process has anything to do with the result?

A. It does, but if I can go to the punch line, I don't need to look at the process. So it doesn't matter to me whether cigarettes are white or whether they're all painted red. These sorts of intervening things aren't a concern so much as on balance what's the effect of risk beliefs on smoking.

Q. So does nicotine have nothing to do with risk beliefs, is that what you're saying?

A. I can't find an effect of smoking status on whether people think smoking is risky.

Q. Well if smokers have lower risk beliefs than nonsmokers, that is in part explained, according to you, by the fact that smokers may be just more risk intense or less risk averse than nonsmokers; right?

A. They may have more accurate risk beliefs. The sequel to the Alarmist Decision paper shows that smokers tend to be more on target in their risk

beliefs than nonsmokers. So they may be better at processing the various kinds of alarmist information they've received.

Q. Or they may adjust their risk beliefs along with their smoking behavior by the pleasurable component of smoking; namely, the nicotine.

A. I've already tested that and we've rejected the hypothesis that smoking behavior has the two-directional influence back on risk beliefs.

Q. Do you believe that the effects of nicotine affect free will in smokers' behavior?

A. I think you can always make decisions.

Q. What's the answer to my question?

A. No, I think people still have free will.

Q. And it's not an all-or-nothing black-or-white, it's a question of whether it affects it to any degree.

A. No, the choice options are always there, the costs associated with choices may differ.

Q. Well does it or does it not have an effect?

A. It doesn't affect your ability to make choices, it affects the payoffs associated with choices.

Q. So it affects choices?

A. It affects options as opposed to your ability to make choices, which would be free will.

Q. Do you think that smokers' lower risk perceptions have anything to do with cognitive dissonance?

A. No.

Q. Why not?

A. That's also covered by the endogeneity test. I'm also skeptical of a lot of the cognitive dissonance research.

Q. Why?

A. If it were that easy to suppress anxieties and fears about risks, the sleeping pill industry would not be as thriving as it is today. I think a lot of the cognitive dissonance research is not formal statistical tests as opposed to qualitative stories.

Q. Well do you think that the sleeping pill industry in this country is completely driven by people who just worry?

A. I'm sure that a lot of the purchases of sleeping pills are among that group who worry, yes.

Q. What percentage?

A. I don't know.

Q. So the literature about cognitive dissonance, you reject it?

A. I don't reject it altogether, but I don't think you can look everywhere and say, oh, there's

cognitive dissonance every time everybody incurs a risk. Lots of risks are rational to take, that's the whole point of what economists have been arguing for decades about risk-taking behavior, and rather than accept this rationality people in other disciplines might suggest that it's cognitive dissonance, but there's no explanation or justification for these claims in many cases.

Q. The conclusion of the Alarmist Decisions paper is, at least in part, that even within the context of two pieces of risk information, decisions appear to be distorted when there is more than one information source.

A. Yes.

Q. If we were designing a new societal model today, I take it you would want there to be a single overarching information source about risks about a particular product or a particular industry; right?

A. If you knew the answer. I mean, it's hard if you have a single source and you're going to keep on changing your mind, because that's no better than having multiple sources with diverse risk judgements.

Q. Assuming you knew the answer and you were designing the new utopia today, you'd want a single information source; right?

A. If you know the answer, that will prevent people from having exaggerated responses to risk.

Q. And the best single information source, if you knew the answer, would be the industry making the particular product.

A. The government. Why not the government? The government is the party without any vested interest in the information. Industry is not a -- generally a credible information source, and I'm talking about things other than risk. If a company declares, "buy our washing machine, it's the highest quality," why should you believe them? There's no cost to them making the claim. So that government is a more credible source.

Q. If government has the information.

A. If government has the information.

Q. If government doesn't have the information, and putting aside how businesses behave, in an ideal world businesses would tell the truth about their own products; right?

A. But even in an ideal world consumers would recognize that there's no cost to the business of not telling the truth, such as saying your dishwasher is better than it really is. So that's why people would discount claims made by the company.

So it's very difficult for companies to make informational claims in the absence of credible costs that they are incurring because of the information provided. So the kinds of information that work for companies are things like warranties for products because that's costly for them to say this product is good for 10 years.

Q. So that if a company makes a statement that has associated with it a credible cost, such as a warranty, then you believe the public has reason to rely on that statement?

A. That increases their confidence as opposed to something where there is no cost to misrepresentation. If there's no cost to misrepresentation, then there's no reason for the public to place any weight on the information.

Q. An example of no cost to misrepresentation would be "buy our washing machine, it's better."

A. That's correct.

Q. In the context of smoking, if a company were to come out this afternoon and say we submit that our cigarettes are a substantial risk factor for lung cancer, would you regard that as a statement that carries with it credible costs or a statement that has no cost to misrepresentation associated with it?

A. Well I don't regard this as an accurate statement or as new information if it were rephrased accurately. But the more important problem is that this mechanism doesn't enable companies to go out there and say our cigarettes are less risky than, let's say, brand X, buy our cigarettes.

So you'd want a situation where everybody is permitted to make this claim, and the best way to do that is to have government ratings as opposed to private-industry statements. That's why I've recommended government ratings for cigarettes as opposed to individual companies making claims.

Q. Do you remember my question?

A. Yes.

Q. Would you like to hear it again?

A. I --

Q. Or can you answer it?

A. I've heard it, I've answered it.

Q. No, you haven't. Let me ask it again.

If a company were this afternoon to come out and say, "our cigarettes cause lung cancer," would that statement be a statement that carries with it a credible cost or a statement that carries with it no cost to misrepresentation as you used those terms?

A. There's no cost to the company saying our

cigarettes don't cause lung cancer. So the trouble with these statements is that it's -- there's an asymmetry in that you're only talking about a statement that you're allowing companies to speak if they say that their product is worse than the average risk perceptions, and if the average risk perceptions is already too high, the only information you're going to permit is where companies mislead the public beyond the average risk beliefs. So I don't see any reason why you'd want to do this because that can't be a costly statement unless it's above the current risk perceptions.

Q. Oh, it may cost them a lot.

A. Only if it's above people's risk perceptions, which are already above the true risk. So only to the extent that you're lying to people will it impose costs. To the extent that people perceive the truth, it will lower costs and not be an effective signal of what you want to convey.

Q. If you'd been lying for 40 years and now you come out and tell the truth, that would have a tendency to increase your costs, wouldn't it?

A. People may pat you on the back, I don't know. I don't think that you can predict the reactions of the public if that's the way it's perceived as you

characterized it.

Q. Without regard to the past, without regard to risk perceptions, if a cigarette company this afternoon were to come out and say our cigarettes cause lung cancer, not in relation to anybody else's, our cigarettes do that, would that statement carry with it credible costs, as you used the term, or no cost to misrepresentation?

A. As I've said, unless it makes people think that cigarettes are worse than they do now there would be no cost, and if cigarettes only have a probabilistic effect on lung cancer, then that's pretty good because smoking has been linked probabilistically to a lot of other outcomes as well. Let me also add that I don't think it's a correct statement or an informative statement to tell me smoking causes lung cancer because that implies certainty when there is none. So I would never convey information of that type.

Q. What would a tobacco company have to say, in 1997, if anything, that would carry with it sort of a -- an aura of reliability because the statement carries with it credible costs about the health risks of the products? Anything?

A. I think the best thing would be to have

government-sanctioned statements, and that would be credible because we know that the government has certified it. And that's what we have with hazard warnings on products. These are formalized statements approved by the government. Tar and nicotine rating systems set up by the government are great ideas as well. I think the safety ratings would be great ideas.

Q. Government-sanctioned statements are only as good as people's reliance on and belief in their government; right?

A. Right, but if the cigarette company's making statements sanctioned by the government there's good reason to believe that it's based on accurate information.

Q. Give me an example of your government-sanctioned statement about cigarettes. What should it say?

A. The on-product warnings for cigarettes.

Q. The existing ones.

A. These are government-sanctioned statements.

Q. Would you change them in any way?

A. If I did, I wouldn't do it based on my own conjectures. What I would want to do is field test different warning wordings and see which warnings did the best job of conveying the true risks of smoking

and affecting smoking behavior in the desired direction.

Q. Have you seen any examples of proposed alternate warnings to the existing ones?

A. Yes, I have.

Q. And have you evaluated those as to whether you believe they would have a positive effect on risk perceptions?

A. I think they might increase risk perceptions, but I don't view that as a positive thing. I think a lot of the warnings such as the ones suggested by the AMA were designed mostly to scare people away from smoking as opposed to get people to the true risk belief, which should be our objective.

Q. If people got to the true risk belief, I take it more people would smoke.

A. That's correct.

Q. So you're in favor of that.

A. I'm in favor of information programs that tell people the truth and let the chips fall where they may, because the government has a role with respect to information not only with respect to cigarettes, but with respect to prescription drugs, the use of seat belts in cars and a wide variety of other areas of consumer safety where it's important to rep --

develop a reputation for not lying to people.
Q. Well in the pharmaceutical context, between the pharmaceutical company and the consumer there's somebody else involved in the process, isn't there?
A. The government.
Q. How about the doctor?
A. There's a learned intermediary for prescription drugs, yes.
Q. And that doctor exercises judgment, hopefully, about what pharmaceutical products to use for a particular patient in a particular context; right?
A. That doesn't relieve the company of its informational responsibilities. You know that. That's why we have hazard-warnings cases.
Q. In terms of decision making at the consumer level, there is no like filter or intermediary for cigarettes, is there?
A. My doctor doesn't come with me when I decide to buy Advil instead of Tylenol, so there are products that are pharmaceutical products for which a learned intermediary does not assist in the decision making.
Q. Have you seen any of the on-package warnings that are in use for cigarettes in Canada?
A. Yes.
Q. Have you evaluated those as to whether or not

they appropriately convey risks?
A. I do not like the Canadian plainer packs proposal, at least. I've not seen the extent to which they were enacted, but to the best of my knowledge there's no evidence that they get people to a truer risk belief so I've not tested their effect on risk perceptions. I've just seen the packs.
(Interruption by the reporter.)
A. I have just seen the packs.
Q. Do you have an understanding of the state of the medical and scientific knowledge about whether nicotine is addictive?
A. I'm not a doctor and I haven't read that literature in detail.
Q. Have you read it at all?
A. I read what the surgeon general says about it.
Q. And the surgeon general says it's addictive?
A. That's the label they've been using recently.
Q. And likewise a number of major medical organizations come to the same conclusion?
A. It wouldn't surprise me that if the surgeon general did something, other people would do the same thing.
Q. To the extent the surgeon general's reached that conclusion about nicotine being addictive, do you

believe that that's part of an antismoking campaign?
A. It could be if they change the hurdle for what they regard as habituation versus addiction. I don't know exactly the process that went into it, but I have worked in government long enough to have some skepticism of whether science is always unbiased. There's often a political agenda to science. I just don't know what the nature of this process was.
Q. Do you believe that the health organizations such as the World Health Organization, American Psychiatric & Psychological Association and so forth have an antismoking bias if they've reached the conclusion that nicotine is addictive?
A. They might. I don't know.
Q. You don't have a view about that one way or the other?
A. I don't have a view. I don't know enough about how those organizations work.
Q. Is -- Based on your experience in government, is the goal of trying to avert or avoid the loss of 400,000 lives a year a good public policy goal? Is that a good use of government effort?
A. Public policies should directed -- be directed at maximizing the benefits, minus the costs, to society. You could save 50,000 lives a year, almost,

by banning motor vehicles. I don't think that's a good public policy goal because you can -- then can't drive cars. The same thing here. 400 lives a year --

Q. 400,000.

A. 400,000 lives per year involves people giving up the pleasures of smoking, assuming that that number's true.

Q. And in that balance you come down on the side of?

A. Letting people make their own decision, since theirs are the lives at risk, and we should inform them of what they're doing, but we shouldn't impose our preferences on them any more than I should prevent people in this room from eating too much at lunch and getting fat, which puts them at risk from coronary disease or other ailments.

MR. SILBERFELD: Take a break.

MR. ATKESON: Sure.

(Recess taken from 9:33 to 9:39 a.m.)

BY MR. SILBERFELD:

Q. Mr. Viscusi, I want to show you a document which has been previously marked as Plaintiffs' Exhibit 263. And if I could direct your attention to the first page and then the last page just for the date,

I want to ask you a question about it.

Let me represent to you that this is a statement of the Tobacco Industry Research Committee. Are you familiar with that organization?

A. No.

Q. You don't know what that is at all?

A. I do, but I'm not familiar with the organization.

Q. Well what's your understanding as to what it is?

A. It was some group set up by the tobacco industry to look into the medical consequences of smoking.

Q. This particular document is dated January 1954 on the last page.

A. Yes.

Q. On the second-to-last page, under the heading "Limit of Powers," you see that?

A. Yes.

Q. There is the statement, "The purposes and objectives of the Committee are to aid and assist research into tobacco use and health, and particularly into the alleged relationship between the use of tobacco and lung cancer, and to make available to the public factual information on this subject." You see that?

A. Yes.

Q. To the extent that this statement was made and made public by the Tobacco Industry Research Committee, do you believe that the American public had a right to rely on the statement at the time that it was made?

A. No.

Q. Why?

A. Well if you're coming up with good information and telling people good information, companies generally don't have the kinds of incentives that would lead the public to believe this evidence was credible, just like if instead of analyzing tobacco and lung cancer this was a washing machine manufacturer group and they said our intent is to analyze whether Whirlpool washers are the best washers made, or the quality of Whirlpool washers, not even saying that their intent was to analyze them to show that they're the best. When they come out and say that their washers are great, there's no credibility. So it depends on the character of the operations, but just providing information as an industry group doesn't necessarily give you credibility.

Q. This statement made in 1954 is not company specific, is it?

A. No.
Q. Made by the industry as a whole.
A. They have the same self-interest that Whirlpool has, so that without knowing how the company's behaving consumers would tend to discount everything they say.
Q. So no one should place any value on a statement saying we commit to aid and assist in research into tobacco and health. Right?
A. That's not information. What -- What inference is the consumer supposed to draw from that? That's not very interesting information to the consumer, it doesn't enable you to raise or lower your risk beliefs.
Q. Does it amount to a commitment at least on the part of the industry to look into the issue of smoking and health?
A. It seems to involve some commitment to look at that, yes.
Q. And to the extent that the industry committed to look at that, would that not operate in some fashion as a level of reassurance to the public that at least somebody's going to look at it as of January of 1954?
A. It's public relations. I'm not sure to what extent people would rely upon this in any way.

Q. To the extent anybody relied on it for the effect of believing that the industry was going to investigate in 1954 the health effects of smoking, would you regard such reliance as reasonable?
A. At what level? Are we assuming that consumers will believe that everything they would possibly want to know about cigarettes will be generated by this research effort?
Q. No. To the extent that there was a controversy in January of 1954 about smoking and lung cancer and this organization made the statement that I just read to you, would it be reasonable for the American public to conclude that they're going to do some work and they're going to research and try to find the answer? Without coming to any conclusion about whether the answer will be found, is that a reasonable conclusion based on this?
A. They could conclude that they would look at it. Whether or not they would find the answer is unclear.
Q. I wasn't suggesting that they would find the answer. At this point in this document 43 years ago, at a minimum the industry was making a commitment to look; right?
A. That's correct.
Q. And to the extent that that information was

widely disseminated in newspapers, television, radio and so forth, do you believe that that might have an effect on risk perceptions?

A. I find this hard to believe in that if somebody comes out and says your product is risky and then you form a risk belief with respect to it and then the party with a vested interest in the sale of the product says we'll look at this, I don't think a consumer's going to lower their risk beliefs just because the manufacturers said they'd take a look at the problem.

Q. Does the statement that we're going to make a commitment to research the health effects of cigarettes amount to a statement that involves credible costs or no cost to misrepresentation, as you used those terms earlier today?

A. It's not a credible situation in that if they come out and say we give tobacco a clean bill of health there's no reason for anybody to put any weight on that information.

Q. Okay. Well they haven't done that in this document; right?

A. That's correct.

Q. We're jumping ahead. Let's not do that.

In this document, having made a commitment to

research the health effects and find whatever the answer might be, maybe there's no connection, is that commitment one that carries with it credible costs or no cost to misrepresentation, in your judgment?

A. Well, once again, misrepresentation has to do with the outcome of the research, but if they're lying about not doing anything, what's the sanction? So let's say they say they're going to do research but they're really not going to do research. I don't see any penalty.

Q. It's still a lie, there's just no penalty.

A. There's no penalty. So even saying that they're going to do research doesn't seem to have any necessary credibility associated with it.

Q. Okay. I'm finished with that one.

MR. SILBERFELD: Let me mark as next in order a document entitled "A Scientific Perspective on the Cigarette Controversy," it bears Bates number CTR 000015 through 34.

(Plaintiffs' Exhibit 3813 marked for identification.)

BY MR. SILBERFELD:

Q. Mr. Viscusi, the document which is before you which is Exhibit 3813 is another Tobacco Industry Research Committee document, and I'll represent to

you that the time frame is 1954 once again, same as the prior document.

Take a look if you would at the introduction page which is the third page of the document, last paragraph. It says at the bottom of the page there, These other authorities -- referring to the ones described in the paragraph above -- find no proof establishing that cigarettes -- cigarette smoking is a cause of lung cancer. Do you see that, sir?

A. Umm-hmm. Yes, I do.

Q. If this statement was made public in 1954, do you believe that that statement would affect people's risk perceptions, coming as it does from industry?

A. No, because if there's information out there indicating that there is a sharp rise in lung cancer, according to this other study, then people would gravitate toward the worst-case scenario based on the diversity of opinion.

Q. Is this an example where there is evidence on one side and now a statement of no proof on the other side of the situation? You described in your alarmist paper that judgements made in the presence of conflicting risk information when there is a diversity of viewpoints appear to be particularly prone to error.

A. If you accept both information sources as being equally credible, which is the scenario that we analyzed in the paper, then people tend to gravitate toward the high-risk estimate. Here we're going to have two information sources; we have the Richard Doll, et al study indicating a sharp rise in lung cancer, and we're going to have a press release issued by this Tobacco Industry Research Committee, presumably citing scientists. So that the weight is not symmetric to begin with, and in terms of how people would process it, you'd expect them to focus on the worst-case scenario addressed by Dr. Richard Doll.

Q. Assume that the Doll information didn't receive public dissemination at the same level that the Tobacco Industry Research Committee information did. Now what's the effect?

A. But the tobacco industry information essentially is a response to something else so you're highlighting and giving added publicity to something you're responding to which is also going to increase risk perceptions.

Q. Take a look at the next page, if you would. Third paragraph from the end, referring to a public statement on January 4th, 1954, this document says,

"...the position of the group comprising the Tobacco Industry Research Committee is that they 'accept an interest in people's health as a basic responsibility and paramount to every other consideration in their business'." You see that?

A. That's the industry -- That's that industry group, yes.

Q. To the extent that that statement was made public, do you believe that the public had a right to rely on that statement as true?

A. I don't think the public knows who the Tobacco Industry Research Committee is, I don't know who in particular the group is or what authority they have, and in general I don't think the public is swayed by these public-relations statements. There's no indication in the economics literature that such vacuous comments are taken credibly.

Q. So you would regard this as a vacuous comment?

A. Because there are no costs to them for misrepresentation, so unless you can show a cost to them of saying that we care about people's health, that's not a costly thing for them to say at that time, then this will not be an effective source of information.

Q. To the extent that this is a false statement,

can that falsity impose costs?

MR. ATKESON: Objection, calls for a legal conclusion.

A. From an economic standpoint, if it turns out that health is not their paramount concern but it's their third most important concern, I don't see any economic cost so I don't see a problem.

Q. So to the extent that that's a misrepresentation, it would impose no cost.

A. I can't see any strong cost to holding people to the letter of this. This is not like George Bush's pledge of "no new taxes."

Q. It cost him.

A. It cost him, that was clear, but a paramount concern as opposed to the second most important concern or third most important concern, which still wouldn't be paramount, I don't see any real sanctions or accountability here and I don't think people take these kinds of public-relations statements seriously.

Q. Okay. Let me show you what's been previously marked as Exhibit 1148. Have you seen Exhibit 1148 before?

A. Yes.

Q. This is the Frank Statement to Cigarette Smokers that was published in newspapers around the United

States?

A. That's right.

Q. To the extent that this was put out in several hundred major newspapers, do you believe that that alone, and the content of it, would have an impact upon people's risk perceptions?

A. If anything it may increase risk perceptions. I don't see where this is necessarily calming material.

Q. I'm not suggesting it should either be calming or alarming, I'm just asking whether you believe the statement would have an effect on people's risk beliefs.

A. It could.

Q. Might, it might not, you can't say one way or the other?

A. That's correct.

Q. Why?

A. I don't know what other information they had at the time before they received this. What was in the paper the day before.

Q. To the extent that in the left-hand column near the bottom it says, quote, we have always -- "We always have and always will cooperate closely with those whose task it is to safeguard public health." To the extent that that represents a commitment to

work with government on the health effects of cigarettes, would you regard that statement as reassuring to the American people?

A. I think I would label that as a public-relations nicety. I think most people are going to get the headline, recent reports on experiments with mice have publicized the smoking risks.

Q. Umm-hmm.

A. And that's the thing that jumps out at them.

Q. Is that the only thing that would matter to them?

A. I think essentially this ad you run into problems of information overload once you get past the first two paragraphs.

Q. To the extent that the cigarette companies wanted to convey to the American public their commitment to find the answers about smoking and health, would you regard the statement in number 1 on the right-hand side as that commitment?

A. What I take from this is that scientists say that it's risky. They're not dismissing these results because these are possibly good scientists, but they think they may not be fully conclusive.

MR. ATKESON: No, I'm sorry. He's talking about this paragraph number 1, not that 1

(indicating).

THE WITNESS: Oh, right. Oh, I was on the left side.

.

Q. The one numbered number 1.

MR. ATKESON: There are two number 1's. He was on the one on the left, that's all.

(Discussion off the record.)

BY MR. SILBERFELD:

Q. Let me repeat the question because I obviously confused you.

The question is: The statement that's number 1 on the right-hand side, would you regard that as a commitment to work on and try to find the answers about smoking and health as of this time in 1954?

A. They indicate they're going to look into it. I'm not sure how much of a commitment this is. They just say they're pledging to aid and assist the effort. So I'm not sure --

Q. Into all phases --

A. -- of this aid.

Q. You mean in terms of dollars you're not sure?

A. In terms of dollars or level or degree of commitment.

Q. Is that statement capable of interpretation that

they're really not going to make an effort at all?
A. It's capable of the interpretation that it will be a modest effort. You don't know what they're going to do. There's no indication of how much aid, how much assistance, so this seems to be once again a more general public-relations type of statement.

MR. SILBERFELD: Let me mark as next in order a document entitled "Tobacco and the Public Interest." It bears Bates number R 00518172 to 8183.

(Plaintiffs' Exhibit 3814 marked for identification.)

BY MR. SILBERFELD:
Q. Mr. Viscusi, Exhibit 3814 is an address before the National Association of State Departments of Agriculture in September of 1963 made by the president of the Tobacco Institute. Do you know what the Tobacco Institute was as of 1963?
A. A trade association on behalf of the tobacco companies.
Q. And this was a speech that was turned into a booklet of some kind. Is that a fair characterization of it?
A. It looks like it, yes.
Q. And it comes roughly nine years after the

documents that we've just looked at. Turn if you would to page 5. In the middle of the page there's a paragraph that reads, "Those of us who work with tobacco share with the millions who use tobacco products a concern over questions raised about cigarettes and health."

It goes on, skipping the next paragraph, "Tobacco people have a double interest in this matter.

First, as human beings, we are interested in the health of our fellow man.

Second, we have a natural interest in the future welfare of our industry and of the industry's customers."

Do you see that?

A. Yes.

Q. To the extent that this statement was made public in or about 1963, do you believe that the American public had a right to rely on the statements made here about the interest expressed by the tobacco industry in the public's welfare?

A. No --

MR. ATKESON: Calls for a legal conclusion.

A. Without getting to the legal issue, from an economic standpoint there's no cost to any industry,

whether it be the tobacco industry or the dishwasher industry, saying that we care about our consumers, and that's essentially what they're saying. So this is not an effective signal or an effective information transfer from an economic standpoint.

Q. From an economic standpoint do you believe that firms, industries that make statements of this kind should be held accountable for the statements they make?

A. No, because there's no guarantee or warranty associated with the claim, so when they make the claim they're not accompanying it with any formal cost provision. So that there's no reason as an economist to go around and start constructing contracts where they don't exist. We just take it as given. This person's making an unsubstantiated claim for which there are no costs. I'm not going to try to restructure the world. That's not what economists do. If they want to make a credible claim, let them offer a guarantee or a warranty.

Q. And if they don't make a guarantee or a warranty, then your view of the world is that people can make misrepresentations with impunity.

A. I'm saying from an economic standpoint people will dismiss this claim so that if he were to say

smoking cigarettes will fly you to the moon, people would dismiss that as being false, and claims that have no effect on people's beliefs are not misleading.

Q. Would this statement have an effect on people's beliefs as of September 1963?

A. No, because there's no cost to him making this claim. So this is the kind of information that people are not going to say, gee, this company cares about me as human beings, unlike the dishwasher industry that didn't make this statement so I'm going to think differently about the tobacco industry than the dishwasher industry or the automobile industry. Any industry can make those claims.

Q. So as long as a company doesn't make a warranty that carries with it a cost, it's your view that they can make any statement they want without any consequences flowing from the making of the statement.

A. They can make whatever statement they want. Now the question is will the statement affect risk beliefs and --

Q. How about consequences to the company of having made a statement that's false? Should there be any?

MR. ATKESON: Again, aside from the legal

question.

MR. SILBERFELD: Yeah.

A. Only if it can be shown that the statement affects people's behavior in a way that leads them to make mistaken decisions.

Q. That's the only time a company should be held accountable for a false statement.

A. Similar to the basketball rule: No harm, no foul.

Q. Okay. Let me show you what's been previously marked as Exhibit 304. Have you ever seen this document before?

A. No.

MR. ATKESON: Let me just ask you a question. The stamp at the bottom, does that indicate where it came from?

MR. SILBERFELD: Which stamp at the bottom?

MR. ATKESON: The "BATCo Limited - Minnesota Tobacco Litigation."

MR. SILBERFELD: I think so.

MR. ATKESON: Is that part of the original -- I assume that's not part of the original so that's --

MR. SILBERFELD: You got me.

MR. ATKESON: Okay.

MR. SILBERFELD: I really don't know.

MR. ATKESON: That doesn't tell us where this came from. I mean, like this is an itinerary. Do we know whose document this is?

MR. SILBERFELD: Yeah, this is a BATCo document.

MR. ATKESON: Okay.

BY MR. SILBERFELD:

Q. Let me represent to you what this is, Mr. Viscusi, and that is in the period April to May 1958 a number of people from British-American Tobacco visited the United States. This document is the report of their visit. The itinerary of their visit is shown on the second page, and in the introduction, which is the third page, they express the purpose of their trip which is to find out some information about various topics. One of the topics, number 1 listed there at the top, is the extent to which it was accepted that cigarette smoke, quote, causes, closed quote, lung cancer. Do you see that?

A. Yes.

Q. And then in the middle of that page and going down to the bottom there's a discussion of what they found when they visited the various tobacco companies

and medical colleges and universities, including Duke, that they visited in the course of their trip. That's the context of this document.

This document says, as of 1958, that "With one exception...the individuals whom we met believed that smoking causes lung cancer if by 'causation' we mean any chain of events which leads finally to lung cancer and which involves smoking as an indispensable link." You see that?

A. Yes.

Q. If that was the consensus view of the companies that were part of this visit as of 1958, do you believe that having that information made public would have assisted the public in 1958 in making risk assessments about smoking and health?

A. I don't see where the company here has any private information. All the information here is based on interviews with people that the government could interview, anybody could interview them.

Q. Well as of 1958 had the government interviewed people within tobacco companies to find out what their views were?

A. No, these are not interviews of people within the tobacco companies, these are just going around from school to school, including the National Cancer

Institute, which is a government agency.

Q. And Liggett & Myers. That's not a government agency.

A. So a couple industry visits. For the most part it's all, or three industry visits. For the most part it's all universities. I'm not sure what the nature of their trip was.

Are these contacts with people who've actually done published research, or is this like a public opinion poll of 18 people on their whistle-stop tour through academia?

Q. Well put that aside and let's go back to my question.

As of 1958, had the government of the United States published or made available to the American people that lung cancer is caused by smoking?

MR. ATKESON: Are you asking him for his knowledge separate and apart from -- just if he knows what documents the government put out in 1958?

MR. SILBERFELD: Yeah.

MR. ATKESON: Okay. So it's unrelated to this.

MR. SILBERFELD: Oh, sure, it's unrelated to this.

MR. ATKESON: Okay.

MR. SILBERFELD: It's in contrast to this is really the question.

A. I forget what the question was.

Q. Simple. As of the spring of 1958, had the United States Government said, in words or in publications, that smoking causes lung cancer?

MR. ATKESON: Other than what the National Cancer Institute people are saying here in this document?

MR. SILBERFELD: Publicly said.

A. The government can publicly say it.

Q. That's not the question. Did they, as of 1958?

A. I don't know what the government did in 1958.

Q. When's the first time the government said anything about the relationship between smoking and lung cancer?

A. I don't know. I know there's a report in 1964, but I don't know what happened before it.

Q. Isn't that the first time?

A. If I knew it was the first time I would have said it was the first time.

Q. If that was the first time, would this report in 1958 represent new information which would be useful to the American people in making risk judgements about cigarette smoking?

A. We don't know what the nature of the information that was gleaned from these visits was, so if, for example, these people came into my office and asked me about monetary policy and I showed up on this list I'd say, yeah, I think the interest rates are probably going to go up, and they'd go around and do a poll of people. That's different than getting people who are actually doing research on it and have findings.

So I don't know what the basis for the opinions are, whether these are people giving their take on other people's research or whether they're reporting their own research, and if it's that they're reporting their own research, it's already in the public domain, it goes out to the New England Journal of Medicine or Science magazine, and these things get picked up in the media.

So I don't know that there's any new informational content here from the fact that somebody took a trip around the country, which essentially is all that happened. There's no new knowledge being created, this is just the -- a walk around the country and a tour of some British Tobacco officials.

Q. If this was new information and represented the

consensus view of four or five of the tobacco companies selling cigarettes in 1958 and they made that information public in 1958, do you believe that that information would be useful to the American public about making risk judgements?

A. As I've said, I don't know that it's new information --

Q. I'm asking you to assume that it's new information, that the companies knew it, and that they came public with it in 1958.

A. Well if it's not --

MR. ATKESON: Just a second. Are you also asking him to assume that all these other universities, Sloan-Kettering, and NCI knew it as well?

MR. SILBERFELD: I'm asking him to assume that.

MR. ATKESON: So you're asking him to assume the information contained in the report here that if all the -- it says "with one exception the individuals whom we met with believed," so you're ruling out three quarters of the list of people here? I mean, what are you asking him to assume in your hypothetical?

MR. SILBERFELD: Let me ask it again. It's

really pretty simple.

Q. If the companies who are listed here, British-American Tobacco, American Tobacco, Liggett & Myers, Philip Morris, okay?

A. Where is this list?

Q. Under the itinerary, sir.

A. I see American Tobacco, Liggett & Myers, Philip Morris. Those three?

Q. And British-American Tobacco, who were the people making the visit. If those four accepted as true in 1958 that smoking causes lung cancer, and if they made that information public, and if that information was new, would the release of that information have been useful to the American public in making risk judgements?

MR. ATKESON: I'm just asking for this hypothetical you're assuming, then, that none of the other people listed here knew that information?

MR. SILBERFELD: I'm not assuming that at all. I'm just asking about the four companies, that's all.

MR. ATKESON: You're saying it's new information, and there's a list of -- a whole list of other people who seem to have known this. And the question is, when you're saying it's new, how does it

relate to these other people?

MR. SILBERFELD: Okay. New --

MR. ATKESON: And the American public includes these other people, National Cancer Institute.

BY MR. SILBERFELD:

Q. I'm asking you to assume that the first widely disseminated statement about smoking and cancer was in 1964. If six years before these four companies had made this information public, would that information, if made public, have been useful to the American people in making risk judgements? That's a yes or no. You can explain your answer if you wish.

A. Well it's not yes or no so --

Q. Well it's yes or no or maybe.

A. So I'll answer --

Q. Go ahead.

A. I'll answer it and you can do with it whatever you want. I don't know that they're generating information. What it seems to be doing is they're generating opinions, and to the extent that they're generating opinions on published studies, which presumably is what they're asking people, I don't see that this opinion poll is new information. The nature of the tour seems to be there are these

published studies out there about smoking and lung cancer, do you believe them? And most people say yes, I believe them. That to me is not new information, and if the government wants to form a consensus body to certify something, they can. The studies are already out there in the literature. I think this is only a question of the degree to which people have confidence in the studies.

Q. No, it's the degree to which this information is publicly available to the lay American public. Whether its opinions, or whether it's new information, whatever it is, if these four companies who knew this in 1958 --

You don't have any doubt that they knew this in 1958, do you, based on this report?

A. What they knew is that most scientists they polled believed the studies linking smoking to lung cancer.

Q. Okay. That being the case, whether it's a statement of opinion or information, whatever it might be, assume it was not publicly known by the lay American public in 1958. Can you assume that?

A. No.

Q. You can't assume that?

A. Because these studies are in the literature.

The newspapers cover this all the time. That's the whole reason why we had this series of ads concerning Sir Richard Doll's study, because this stuff is out there in the media.

Q. I'm asking you to assume for purposes of my question that the American public did not know that smoking causes lung cancer in 1958. Can you assume that?

A. This is five years after we had the Richard Doll controversy. Why should I assume away something that we know has already been highlighted in line one of the tobacco ad that there are these studies out there that show a lung cancer link. You can't get any more shrill than that in terms of an alarm.

Q. So you can't make the assumption, it's impossible for you.

A. Why make -- I see no reason to make an assumption that's not true.

Q. You know it's not true.

A. I know it's not true. If the --

Q. What --

A. The earlier exhibits you gave me show it's not true.

Q. What do opinion polls in 1958 show about people's awareness of the smoking-lung cancer

connection. Do you know?

A. I know 1954.

Q. What's it in 1954?

A. Well that -- In the case of 1954 they asked is a -- does smoking cause lung cancer?

Q. What did people say?

A. It's in my book.

Q. Less than half, right, believed it?

A. But I don't believe it either. I believe smoking has a probabilistic effect, but it's not zero one so it's a framing question.

Q. Do you believe that to the extent that this information was known by the four companies, whether it's a statement of opinion or a fact, that that information would have been useful to the American people in any way?

A. It's not private information. Anybody can do this, anybody can do a poll. The government can do this, consumer group could do this, this is not unique research information about something the companies know, this is just a public -- in essence, this is a walk-around public opinion poll of some scientists that they happened to visit on their trip.

Q. Let me show you what's been previously marked as 592. This is another British-American Tobacco

document dated 1980. Let me direct your attention to the third page of the document entitled "CHANGE OF STANCE ON SMOKING AND HEALTH," and direct your attention to the paragraph numbered 3 under "THE CURRENT SITUATION." Do you see that?

A. Yes.

Q. It says, "A major difficulty for us is that public and medical opinion has changed so much over the past twenty years that our stance on smoking and health - that we are not doctors and cannot make judgements - is no longer credible. In fact it is working against us and the international reputation which is the basis of our success, is being eroded." Do you see that?

A. Yes.

Q. If in 1980 the British-American Tobacco Company had come out and said whatever our stance has been for 20 years, our beliefs about smoking and health are no longer credible, if they'd made that statement as they did in this document but they made it publicly, do you believe that that statement would have affected people's risk beliefs?

A. I don't take from this statement what you're taking from it. I think what they're saying is that they're not the medical community and they weren't

making judgements regarding smoking, and saying that that's not credible is different from what you are implying, which is that the statements they were making were not credible.

Q. Well it says that "our stance on smoking and health...is no longer credible." Right?

A. And their stance, as I interpret this, is that I'm not making judgements on the health aspects, in effect they're taking a standoff attitude in not entering the fray on the medical debate. So they're standing on the sidelines on the medical issue.

Q. And do you believe if they'd come out in 1980 and said we're not doctors and can't make judgements that that fact would have been useful in any way to the American public in making risk judgements about smoking and health?

A. That apparently is the theme of what they had been saying, that they are not doctors and cannot make judgements.

Q. What's the answer to my question?

A. That was it. That's what they've been saying, so --

Q. Would it have made a difference to the public, sir? That's the question.

MR. ATKESON: His answer -- It's his

understanding from this that that's what they had already been saying, so that wouldn't be a change.

MR. SILBERFELD: He didn't say that. You said that.

THE WITNESS: That's what I said.

MR. ATKESON: He said it, you can read his answer.

Q. It wouldn't have made any difference, is that what you said?

A. That's what the point of this is. They are saying we're not doctors and can't make judgements. That's been their theme, according this statement.

Q. And if that theme as of 1980 was in their judgment no longer credible and they came out and said it's no longer a credible position for us, would that have been of any benefit or use to the American public?

A. No, because you don't know what they're saying. To say that our past position is no longer credible, we have to now discuss this, well now what are you going to say? To say that we have a past position that's not credible doesn't imply what your new position is.

Q. So had this statement that I've just read to you been made public, that would have been of no use or

benefit to the American people.
A. I don't think this would even hurt them from a public-relations standpoint. This looks pretty neutral to me.
Q. I show you what's been previously marked as 502, another British-American Tobacco Company document. If I could direct your attention to the second page of it, at the letter m) it says, "The company's position on causation is simply not believed by the overwhelming majority of independent observers, scientists and doctors." Do you see that?
A. Yes.
Q. To the extent that that was the company's belief as of 1980 when this document was created, do you believe they had an obligation to make that information available to the public?
A. To tell people that most people disagreed with their position?
Q. Yes.
A. Not if you believe in your position.
Q. It's not a question of whether they believe in it.
A. If I believe in my position, whether or not other people agree with me doesn't really matter. To me I will go out with what I believe.

Q. Would the fact that the company's position is not believed by the overwhelming majority of observers, scientists and doctors, have been a useful bit of information to the American people as of 1980 on the issue of smoking and health?

A. Let's see, this is 16 years after we've had on-product warnings that announce that there is a risk associated with smoking, we have annual reports to the surgeon general that have been issued for well over a decade highlighting risks associated with smoking. I'm not sure what position it is that you're talking about here since the company puts on all of its products hazard warnings. Is this the position they take in court cases? Is this the position for public announcements? Is this the position in advertising? Certainly there are many many formal ways in which the company is providing the information through both on-product warnings and through ads as of 1980. So I'm not sure what this is even pertaining to.

Q. You've not seen any evidence of the cigarette industry espousing the theme that the issue of smoking and health is not proven, or that there's a controversy, or that there's doubt about the relationship? You've not seen anything to that

effect?

A. Oh, I've seen that but --

Q. What's the effect of that?

A. I view that, the effect of that is that people will finally start to think of smoking in probabilistic terms. And the risks associated with smoking are probabilities, and the antismoking groups are always trying to create a situation in which the risks are viewed as certainties, statements such as smoking causes X, and the probabilistic view is closer to the scientific truth.

Q. To the extent that firms such as British-American Tobacco were espousing the view that there's doubt about the relationship of smoking and disease or that there's a controversy, if that's the position being described as unacceptable in this document and not believed by the overwhelming majority of scientists, et cetera, if the company had made that public do you believe that that would have been of any use or benefit to the American people in making risk decisions?

MR. ATKESON: The hypothetical is that the company had said scientists, doctors and observers don't believe us?

MR. SILBERFELD: Right.

MR. ATKESON: Other than that, what scientists, doctors and observers were already doing in general?

MR. SILBERFELD: Just using this document for what it says.

A. I'm not sure what it is the company's going to say because I believe there is still a debate over the risks associated with smoking in terms of the magnitude of the risk. So that if you look at surgeon general's estimates, coupled with the population statistics, I estimated the death risk associated with smoking as being somewhere in the range of .18 to .36, something of that neighborhood which is a fairly wide band. So there's still remaining tremendous uncertainty regarding the magnitude of the risk so I don't view statements regarding the fact that everything has not been nailed down with precision as being inaccurate.

Q. I show you what's been previously marked as Exhibit 404. This is a 1968 document from Hill and Knowlton. Do you know who Hill and Knowlton is?

A. Public relations firm?

Q. Right. Do work for the tobacco industry.

A. Do they?

Q. Do they?

A. Do they?
Q. Do you know?
A. I don't know.
Q. Do you see the subject of this memo, "Tobacco and Health Research Procedural Memo"?
A. Yes.
Q. At the bottom of the page there is, under the heading "SELECTION OF MATERIAL," a discussion of what types of materials should be selected and what the criteria for selection are. Do you see that?
A. Yes.
Q. On the top of page 2 is a statement that says, referring to the tobacco and health research document, "The most important type of story is that which casts doubt on the cause and effect theory of disease and smoking." You see that?
A. I do.
Q. To the extent that the goal, as of 1968, of the tobacco industry was to cast doubt on the cause-and-effect theory of disease and smoking, what effect would that have on the public's perception of risk?
A. Well this is not the tobacco industry, this is a marketing firm outside of the industry.
Q. Directed to the tobacco industry -- institute;

right?
A. I don't know what the Tobacco Institute had as a reaction to this.
Q. Assume that they adopted it. What would the effect be on the public's perception of risk related to smoking?
A. I don't understand what this group is doing other than Xeroxing articles and mailing them to the Tobacco Institute.
Q. What's the answer to my question, sir?
A. I see no effect on the public of Xeroxing articles from a medical journal and sending them to the Tobacco Institute.
Q. To the extent that it was Hill and Knowlton's job to issue press releases and make publicly available medical articles which cast doubt on the cause-and-effect theory of disease and smoking, what would that act do to the public's perception of the risks of smoking?
A. It might give them a more balanced view to the extent that articles documenting risks will receive more publicity in that they would be more newsworthy. It's always true in economics, for example, that it's much easier to get attention or to publish articles that show effects as opposed to

articles that don't show effects so that there's a systematic bias in science against publishing papers in which there are no effects. So this would be attempting to redress that imbalance.

Q. So making a concerted effort to cast doubt on the cause-and-effect theory is a good thing, in your view?

A. Well what they're doing is only finding articles published in established medical journals and disseminating scientific accepted articles to the general public, and I see nothing wrong with attempting to create a sense of balance, particularly given the incentives of the scientific literature and the popular press to give greater publicity to studies which find effects as opposed to studies which don't find effects.

Q. Nothing wrong with trying to inject a sense of balance if that's your goal; right?

A. If that addresses what is currently an imbalance. It doesn't matter what your goal is, but if there's currently an imbalance, trying to have more balance leads people to have a more accurate judgment.

Q. If your goal is to cast doubt on a theory, if that's your goal, --

A. No. The stories themselves are the ones that cast doubt, these are stories based on the medical literature so it's not what we're doing or they're doing as part of their efforts, but they're identifying medical studies that cast doubt. That's the most important type of story that they're trying to identify, and they're just trying to disseminate those, they're not trying to say that their efforts are to do that.

Q. Well they're identifying that the most important type of story to disseminate through their efforts is one which casts doubt; right?

A. That's correct.

Q. And if someone intentionally sets about, in a controversial situation, to cast doubt rather than answer a question, what's the effect of that on risk perceptions?

A. They're just trying to prevent -- present the other side, and if there's already stories that have been given inordinate publicity on the other side then you would want to give these stories on the opposite side a leg up in terms of enabling the public to get a balanced perspective.

Q. That's not what they say.

A. Excuse me, let me finish the sentence.

It's well established in the literature that newly identified risks are overly publicized. This was a newly identified risk and it's going to receive excessive publicity compared to its true nature based on the scientific evidence available at that time.

Q. The identified risk was new as of '68?

A. Well, it was evolving. The information regarding the risk was evolving, and it's still evolving. We don't, for example, know what the risk of environmental tobacco smoke is. This is still very much in the air.

Q. In more ways than one.

You said earlier that -- when we were talking about the Frank Statement, the newspaper ad, that people generally don't get much past the first couple of sentences.

A. Well they'll have the -- by far the greatest impact, the first few pieces of information.

Q. Would headlines also have a great impact, such as a statement that says this is A Frank Statement to Cigarette Smokers? Would headlines have a great impact?

A. They're supposed to get people to read it, but there's no informational content there.

Q. If a headline has informational content, does it

have a tendency to have a greater impact than something that appears down in the middle or the end of an article?

A. It would if there was a lot of information on it, yes.

Q. Take a look at, again, the second page, about two thirds of the way down, there's a section called "Headlines." Do you see that?

A. Yes.

Q. It reads, these, referring to headlines, should be carefully written on the premise that doctors and scientists, like other readers, grab information from the headlines and nothing more. Thus, the headlines should strongly call out the point -- controversy, contradiction, other factors, unknown. Do you see that?

A. Yes, I do.

Q. To the extent that those kinds of headlines were used in an effort to cast doubt on the cause-and-effect theory of disease and smoking, what effect would that have on the public's risk perceptions?

A. I think mostly these exclamation-point-type headlines are attention grabbers to get people to read the substance, and people like to read about

controversies, contradictions, new information so this would increase the incentive of people to pay attention to it.

Q. And read about --

A. Whatever it is that they're telling them.

Q. Which would cast doubt on the cause-and-effect theory; right?

A. Right, it was to call attention to whatever it is they're disseminating.

Q. In terms of the dissemination of information about risks, if the goal of this document was to cast doubt, would you regard that as a proper motive?

A. It depends on what the context is. So if you're in a situation where it's not a balanced information situation originally, then you want to present the other side.

Q. If your goal is to present the other side that's one thing; right? If your goal is to cast doubt, regardless of whether the balance is struck, that's not a proper motive, is it?

A. It is if the other side is not always accurate and you want to present the other side of the argument.

Q. Without characterizing the presentation as presenting the other side, if your stated goal is to

cast doubt on an important public health issue, that's not a proper motive, is it?

A. No they're casting doubt on a line of research if there are other studies that disagree, just in an effort to provide a balanced perspective.

(Recess taken from 10:43 to 10:50 a.m.)

BY MR. SILBERFELD:

Q. Let me show you Exhibit 144 which has been previously marked.

(Discussion off the record.)

Q. This document, Mr. Viscusi, is from a member of the research department, Dr. Wakeham, to the CEO of Philip Morris, Mr. Cullman, at this time.

I'd like to direct your attention to paragraph 2 about two thirds of the way down on the first page. Do you see that, sir?

A. Yes.

Q. It says, "It has been stated that the CTR" -- You know what the CTR is, don't you?

A. No.

Q. Council for Tobacco Research?

A. Oh, I guess I do know.

Q. Okay. "...that CTR is a program to find out 'the truth about smoking and health.' What is truth to one is false to another. CTR and the Industry have

publicly and frequently denied what others find as 'truth.' Let's face it. We are interested in evidence which we believe denies the allegation that cigarette smoking causes disease." Do you see that?

A. I do.

Q. If Philip Morris in 1970 had publicly acknowledged, in the person of Dr. Wakeham, this belief, do you believe that that would have affected the public's perception about what had gone before in terms of the controversy between the industry on the one hand and certain scientists on the other, --

MR. ATKESON: When you're asking "perception," you're not talking about risk perception, you mean just perception of the industry?

MR. SILBERFELD: Actually I hadn't finished and I was about to go to the risk perception.

MR. ATKESON: I'm sorry, I apologize.

MR. SILBERFELD: Let me restate it just to make a clean record.

Q. If Philip Morris in 1970 in the person of Dr. Wakeham had called a press conference and said publicly what is said in this internal memorandum, do you believe that that disclosure, had it been made, would have affected the public's risk perceptions

about smoking based upon what had gone before, which is on the one hand the cigarette industry saying there's a controversy and some people saying there's a cause-and-effect relationship?

A. This statement was made over a decade after the CTR establishment. During that time there was substantial research published indicating risks associated with smoking. The question is, is there a body of evidence on the other side?

What this memo's pointing out is that from a scientific standpoint it's almost impossible to prove a negative so that I think what they're saying here is that they're in a very unbalanced situation from an advocacy standpoint because it's hard scientifically to prove a negative. So I don't take away from it as adverse an inference as you're making.

Q. I make no inference about it at all. I'm just asking this question: Without characterizing anything about this, if Dr. Wakeham or Mr. Cullman or the both of them had called a press conference on December 8, 1970 and said what it says here, that we're interested in evidence which denies the allegation that cigarette smoking causes disease, would that public disclosure have had any effect

whatsoever, in your mind, on the public's perception about the risks of smoking?

A. No.

Q. Why?

A. Because this is 1970. This is 17 years after the original statement. There have been 17 years of medical research indicating potential risks, and what they're saying here is that it's difficult to do a study in any area on any topic and prove a negative. It's just impossible to do. That's not a hypothesis test. So that it's going to be hard to find the evidence on the other side even if it exists -- even if the evidence exists, it's going to be very difficult to find.

Q. Is it fair to characterize this statement as a statement of motive?

A. Well this is one researcher. This isn't CTR.

Q. No. I'm talking about Dr. Wakeham. Is this a statement of Dr. Wakeham's motive, that is, we are interested in evidence which we believe denies the allegation?

A. There's lots of bad news out there for the companies, the nature of scientific inquiry is such that you can't prove a negative. There's a bias in terms of the character of the news that comes out.

All he's saying is that because you can't prove a negative and the bias is inherently going to be in favor of the positives being picked up by the scientific literature, that they're trying to address the other side of the argument.

Q. Did you understand my question?

A. I thought I was responsive.

Q. Is it a statement of motive, yes or no?

A. I don't view this as a motive. This is not like why did you kill your wife. I don't know what's going through his head.

Q. It's not a statement of motive as to what they're interested in in the smoking debate; right?

A. That's not a statement of motive as I interpret it as an economist. Now I'm not making legal judgements as to what you mean by "motive."

MR. SILBERFELD: Let me mark as next in order a three-page document bearing Bates number 500518873, 74 and 75.

(Plaintiffs' Exhibit 3815 marked for identification.)

BY MR. SILBERFELD:

Q. 3815, Mr. Viscusi, is a press release from the Tobacco Industry Research Committee dated 1960. Do you see that?

A. Yes.
Q. It is a statement from a Dr. Little, the scientific director of the Tobacco Industry Research Committee. Do you see that?
A. Yes.
Q. And about middle of the page it says, "He observed that no one really knows what part, if any, smoking plays in causing lung cancer, but new evidence tends to throw doubt on, rather than support, the charges against smoking as a major causitive factor in this disease.'" Do you see that?
A. I do.
Q. Based upon what you understand the literature to be as of 1960, do you regard this as a truthful statement?
A. I don't know what the literature was in 1960.
Q. If this statement was made public as a press release and picked up by news media, either the print media or television or radio, and disseminated to the American people in 1960, would this information have a tendency to confuse risk perceptions made by the American public as of that time?
A. First of all you're conditioning it upon if it's picked up, and this is the kind of information that tends to be underplayed so --

Q. I'm asking you to assume that it is picked up.
A. No, but the reason why I'm pointing this out is that to the extent that negatives like this tend to get underplayed in the literature, they tend to get underplayed in the media, this would not tend to be picked up. And also it would not tend to confuse because finally you're getting out there information regarding other scientific studies which presumably are valid. That's why he's talking about new evidence. You'd want to play these studies up and give them attention, not just the studies indicating the opposite result.
Q. Assume for purposes of my question that this press release was disseminated and picked up by wire services, newspapers, television and radio. Assume further that it was read or listened to by some segment of the American people. If read or heard, would this statement have a tendency to confuse or elucidate an American consumer about the risk perceptions of smoking?
A. My third assumption is going to be that there is in fact new evidence and providing information regarding the entire set of scientific evidence based on the state of information at that time would better inform people.

Q. So in fact it would not cause confusion?
A. Not based on the state of information at the time if in fact there is new evidence, which is what is stated here.
MR. ATKESON: Can we go off the record for just one quick second?
MR. SILBERFELD: Sure.
(Discussion off the record.)
MR. SILBERFELD: Let me mark as next in order a document entitled, "RADIO BROADCAST TRANSCRIPT." It bears Bates number 500062010 to 2018.
(Plaintiffs' Exhibit 3816 marked for identification.)
BY MR. SILBERFELD:
Q. This document dated 1962, Mr. Viscusi, is a Radio Broadcast Transcript, and the guest is George Allen, president of the Tobacco Institute. Do you see that?
A. I do.
Q. On the second page, in response to the question does the institute or anybody in the industry feel that a case has been established that smoking is connected with lung cancer, Allen answers: "No, the industry -- and you say anybody in the industry -- as

far as I have heard anybody express himself, it is that the matter needs thorough and energetic scientific investigation. All the medical authorities as far as I know, or practically all of them, agree that nobody knows what causes cancer, and specifically lung cancer, and this is a matter that remains to be found by thorough and energetic scientific investigation." Do you see that?

A. I do.

Q. Do you believe that the statement that there is no connection between smoking and lung cancer as of 1962 would have a tendency and reason to affect people's risk perceptions about cigarettes?

MR. ATKESON: Let me object and say that's not what's said here.

Q. Go ahead.

A. What George Allen is saying is that the relationship has not been nailed down with precision. To the extent that you're even having this debate would make more salient in people's minds the fact that there is this lung cancer literature which would tend to call people's attention to the risk.

Q. So this is a useful statement in alerting people that smoking is connected to lung cancer. Is that

what you're saying?

A. People who did not know about the literature would know that, yes, there are studies out there that indicate a lung cancer risk, but nothing's been nailed down with precision. This is, after all, 1962.

Q. What's the significance of the date to you?

A. You can't apply the scientific information standards of today to what should have been known 35 years ago, so our scientific knowledge was evolving then. It's still evolving with respect to some risks of smoking, as we discussed earlier.

(Discussion off the record.)

Q. As of the year 1968, based upon your understanding of the general and technical literature regarding cigarettes and smoking disease, do you believe that the debate about whether smoking causes health effects had really only begun as of that year?

A. 1968?

Q. Yes.

A. No, because we have cited here in the document you just gave me that three years previous to 1962, which would seem to make it 1959, the surgeon general issued a report in which he stated that the evidence was that smoking was a chief cause or primary cause

of lung cancer. So this is a decade before the period you're talking about.

Q. So that a statement that the debate had only begun would not be a correct statement --

A. No, it still continue --

Q. -- as of 1968.

A. The debate over some smoking risks are still continuing. Depends on the risk.

Q. Not the question.

As of 1968, if someone said the debate had only begun in '68, that would not be a truthful statement, would it?

A. With the implication being that it was unanimous until 1968, no, because it was not unanimous until 1968 because the tobacco industry itself said in 1953 it's not unanimous in their ad.

Q. And the debate had begun in 1953 or '54.

A. I'm not sure when the debate began.

Q. Well it sure began before 1968, didn't it?

A. Yes, it did.

Q. Well before.

A. There was a debate before.

Q. Let me show you a document which we'll mark as next in order, Bates number 502644592 to 4616.

(Plaintiffs' Exhibit 3817 marked for

identification.)

(Discussion off the record.)

BY MR. SILBERFELD:

Q. Exhibit 3817 is a tobacco industry publication called, "THE CIGARETTE CONTROVERSY." It bears the date of April 23rd, 1968. Do you see that?

A. Yes.

Q. Turn to the third page of the document if you would. At the top of the page it says, "Do cigarettes cause disease?" Do you see that?

A. Yes.

Q. And the answer that's given is: "This is the central question in a continuing cigarette controversy that concerns millions of Americans. The debate has not been closed; it has really only begun." You see that?

A. Yes.

Q. That's not a truthful statement, is it?

A. These are exhortatory fighting words I think, and they indicate --

Q. Counsel is showing you something. What's he showing you?

A. A subsequent page of the document indicating that "the controversy has raged since the early 1950s," according to the same document on page 3.

Q. Okay. Is this statement a truthful statement?
A. Yes, it acknowledges that a debate existed before that is not yet over. When they say it is really just only begun, this is like a pep talk.
Q. Where do you get the information that this is a pep talk?
A. "It has really only begun," this is like this document's going to really get this debate going, this is a -- an exhortatory statement.
Q. It's not a statement of fact.
A. It indicates that there was a debate, the debate's not over, but we're going to give you information that will foster more debate.
Q. Do you believe that you can establish causation by statistical association?
MR. ATKESON: Are you asking him from a medical standpoint or as an economist?
MR. SILBERFELD: Statistical standpoint.
A. Depends on what you control for.
Q. Can it be done if you control properly?
A. If you control for everything and the only thing that is not controlled for is one particular variable, then you've got a statistical relationship. Whether it causes it or not seems to be unimportant for me as an economist provided that

whenever you turn that variable on you get the bad effect, whenever you turn the variable off the bad effect goes away.

Q. Would you say that it was not possible to make associations by the use of statistics?

A. Well simple correlations don't tell you anything so, for example, smokers are more likely to be injured on the job but that's not because smoking does that to them, that happens to be because they're different kinds of people.

Q. By the year 1973, five years after the document we're looking at, do you believe that the relationship between smoking and health was still very much a controversy, based on your understanding?

A. I think it's still a controversy.

Q. Very much a controversy?

A. Yes. There's a big debate over the extent of the heart disease and lung cancer risk associated with environmental tobacco smoke. That's nowhere near being resolved in terms of the magnitude of the risk. The mortality risk estimates, even from the surgeon general, the low and high end differ by a factor of two. If this is not a controversy, I don't know what is. It's not like we've pointed any of these answers.

Q. Is there any doubt in your mind as you sit here today that some number of people die from smoking?
A. No.
Q. No doubt.
A. No doubt whatsoever.
Q. The doubt is how many; right?
A. Yes.
Q. The doubt is what proportion of smokers die from smoking; right?
A. That's correct.
Q. But as to whether a single person has ever died of smoking illnesses, there's no doubt about that, is there?
A. I don't have doubt as of 1997, no.
Q. How about 1987, as to whether a single person ever died.
A. I didn't doubt it then either.
Q. '77?
A. I didn't doubt it. I'm not sure if other people did, but I didn't doubt it.
Q. '67?
A. No, I knew smoking was bad for your health even before 1964.

MR. SILBERFELD: Let me mark as next in order a document which is a transcript of a "60

Minutes" program in 1973, bears Bates number 503665743 through 5757.

(Plaintiffs' Exhibit 3818 marked for identification.)

BY MR. SILBERFELD:

Q. Exhibit 3818, Mr. Viscusi, is a "60 Minutes" transcript interview between Mike Wallace and James C. Bowling who at the time, I'll represent to you, was the president of Philip Morris. Okay?

A. This is what they put on the air and not the transcript of the full interview, or is this the full interview?

Q. I'm not sure. Does it matter?

A. It may matter in terms of what's edited out, so I don't know if I'm missing something.

Q. Well let me ask you first of all whether in and as of 1973 CBS's "60 Minutes" was a widely watched television show.

A. That's correct.

Q. And therefore to the extent it had subjects covered on the program, it would have a tendency to impact people's perceptions, generally?

A. Depends on the content.

Q. Without getting into the content for a moment, do you think that a program about smoking in 1973 on

"60 Minutes" would have a tendency and a reason to affect people's perceptions about smoking and risk?

A. Once again, depends on what they say.

Q. Take a look at the third page. There's a question there or a statement by Wallace that says, "there are rules full" -- probably rooms full -- "of medical publications and reports and statistical analyses and clinical studies, all of which, all of which, say essentially the same thing, that cigarettes are linked to cancer, emphysema, heart disease and so forth. True?"

And Bowling's response is, There are studies that certainly seem to indicate that there is enough basis to cause more research to be done. The puzzle to me is why there are those who would cut off the research. We say do the research. We want to know the answers." I shouldn't think everyone would want to know the answers -- "I should think" -- rather, "everyone would want to know the answers and it doesn't seem to me to serve a scientific cause to act as if the case is proven when it is still very much a controversy."

As of 1973, was there any doubt in the public and technical literature that cigarettes were linked to cancer, emphysema and heart disease?

A. There is later on this page. They have Lancet magazine, which is a respected medical journal, has 30 scientists writing in on it, so there seems to be some controversy.

Q. Well that answer that you're giving me has nothing to do with my question, sir. It's whether as of 1973 the link between cigarettes and cancer, emphysema and heart disease was something about which there was very much a controversy. Are you saying it was?

A. Oh, I think people generally had a subjective belief that there was a link, but it seems that there remained some controversy in the scientific literature over how precisely it had been nailed down, which seems to be what these articles are referring to.

Q. "These articles" meaning the Lancet letters to the editor?

A. That's correct.

Q. That talk about other research.

A. That's correct.

Q. Not the research having to do with the link between cancer and emphysema and heart disease and smoking.

A. It seems to me that's what this other research

pertains to.

Q. To the extent people in 1973 watched "60 Minutes" and heard these words from Mr. Bowling, do you have a belief as to whether or not that would affect their risk perceptions about smoking in any particular direction?

A. I don't see where it would affect anything. I'm not also sure that this segment of the interview ever aired, because it looks like this is a transcript of the whole interview, so -- they say "Recording equipment turned off" on page 14, and generally TV shows don't air the entire interview, they air only edited segments. But assuming they did air it, I don't see where this would cause any shift in people's risk beliefs.

Q. Would it tend to confuse them?

A. There are studies out there that the fact that the risks are imprecise doesn't confuse people. When risks are imprecise, they tend to gravitate to the worst-case scenario.

Q. Would it have a tendency to reaffirm a belief in people's minds that maybe, just maybe, smoking doesn't cause disease?

A. I think the -- highlighting the fact that there are lots of these medical publications that indicate

a risk is going to be the dominant message that people take away from this, even if you are trying to say that they haven't nailed it down with precision.

MR. ATKESON: I just note that if you read the last paragraph of Mike Wallace's, here, it's clear that not all of this aired.

(Discussion off the record.)

MR. SILBERFELD: Let me mark as next in order a document that bears Bates numbers TIMN 0084430 through 4434.

(Plaintiffs' Exhibit 3819 marked for identification.)

BY MR. SILBERFELD:

Q. This is a 1979 document, Mr. Viscusi, from the Tobacco Institute.

MR. ATKESON: Let me just note for the record that pages -- some pages are missing and pages are also out of order. The fourth page should actually be the third page.

MR. SILBERFELD: That's a copying problem. Sorry about that.

MR. ATKESON: No, no, no, I'm just -- for instance the first page of the preface follows the second page of the preface.

MR. SILBERFELD: That's a copying problem.

Sorry about that.

BY MR. SILBERFELD:

Q. As of 1979, this document on page 1, the internal numbering of the document, do you have that? It says "Overview."

A. Yes.

Q. It says in the middle of the first paragraph, "Despite millions of dollars spent since that time, -- referring to the prior period -- "both by the government and the tobacco industry on smoking and health-related research, many questions about the relationship between smoking and disease remain unanswered." Do you see that?

A. Yes, I do.

Q. Assuming that this information was made public in 1979, would that statement have a tendency to affect people's risk perceptions about smoking?

A. I think it's still true today. Many questions are still unanswered.

Q. In the next paragraph he goes on to say, "Despite claims to the contrary, no one -- in government or industry -- can explain the reported associations of smoking with lung cancer, heart disease, emphysema, low infant birth weight, and yes, even cancer of the pancreas." Do you see that?

A. Yes.
Q. Would that statement, if made public, have a tendency to affect people's risk perceptions about smoking and disease?
A. No, for two reasons. First, all they're saying is that people don't understand the linkages. To the extent that it is made public, presumably it would increase people's risk beliefs because they're noting that there are these associations with all of these ailments and maybe everybody had never heard of the link to the cancer of the pancreas. So --
Q. So that if a member of the public, for example, hadn't worried about pancreatic cancer before this time, hearing this would raise their risk perceptions because now that they've heard it, that's something to worry about. Is that what you're saying?
A. There's another reported association here and that could potentially be an additional thing they hadn't thought of. Now it may be that they already had overly high risk perceptions to begin with and that would just simply crank them up higher.
Q. As of 1979, based on your understanding of the publicly available and medical and scientific literature, had there been any cause-and-effect relationship established between cigarettes and

disease?
A. I'm not a doctor and I haven't analyzed it from that standpoint. I know there's a correlation, and I think a reasonable person would assess that there's a risk based on the correlation, but the extent to which it's a cause-and-effect relationship is something that you'd want a medical expert to judge, based on the literature.
Q. To the extent that somebody had said as of 1979 around the time that this was published, that scientists had not proven that cigarettes cause any human disease, would that be a reasonable statement to make?
A. Well they haven't proven a causal linkage. What they have shown is the correlation, so it may be an accurate statement. Once again that's a medical judgment, that's not an economic judgment.
Q. In terms of public statements, if you fail to include the information that a linkage has been reported by saying that no cause-and-effect relationship has been established, you're not making a completely truthful statement, are you?
A. They are stating the linkage. They're saying there is a reported association of smoking with lung cancer, heart disease, et cetera, et cetera, et

cetera.

Q. Take a look at the next page. At the top of the page there is a statement, if we're on the same page, that reads, "scientists have not proven." Do you see that?

A. That's correct.

Q. "Scientists have not proven that cigarette smoke or any of the thousands of its constituents as found in cigarette smoke cause human disease." You see that?

A. I do.

Q. Do you regard that as a statement capable of affecting a public member's perceptions about risks, if it was publicized?

A. Once again, it's the issue of whether correlation and causality are the same thing, but it also goes back to what I said this morning, which is that statements that promote the interests of the tobacco industry, made on behalf of the tobacco industry, will not lower people's risk perceptions because people do not perceive a cost to the tobacco industry of making those claims. So this is not going to be a credible piece of information, if it would be viewed favorably by people, because there's no reason for them to think that it's true. There

are no costs to making this statement.
Q. So people hearing this would not be affected by it because it's likely the same as saying my dishwasher's better than somebody else's dishwasher.
A. If they regard the information as favorable, they would ignore it for that reason. If they regard it as unfavorable, it might increase their risk perceptions.
Q. By 1990, do you believe that smoking was at least one of the causes of the chronic diseases that had been associated with it?
A. Once again, I don't know what the status of the medical literature was with respect to causation as opposed to correlations. I did believe myself that as of 1990 smoking increased the risk of certain things in an adverse nature.
Q. And that as of 1990 it was at least one of the causes of emphysema, heart disease or lung cancer? Not the only cause, but one of them?
A. If by that you mean that it increased the probability of those adverse events, yes, but I don't know whether that's the same thing as being a cause, because I don't know the extent to which they've identified causal mechanisms.
MR. SILBERFELD: Let me mark as next in

order a two-page document, bears Bates numbers 507706398 and 6399.

(Plaintiffs' Exhibit 3820 marked for identification.)

BY MR. SILBERFELD:

Q. This is a letter from the manager of public information, public relations department, R.J. Reynolds Tobacco Company, to an individual named Bergsteuer in Northridge, California, apparently in response to a letter from that individual about advertising.

Let me direct your attention to the last paragraph on the first page. "Despite all the research going on, the simple and unfortunate fact is that scientists do not know the cause or causes of the chronic diseases reported to be associated with smoking." Do you see that?

A. Yes.

Q. That wasn't a true statement in 1990, was it?

A. I don't know what the state of scientific knowledge was regarding causation. As I've indicated before, I did believe that people who smoked had a significantly higher probability of a chronic disease, but that's not the same thing as identifying a causal mechanism. That's a medical issue. That's

not my game.

Q. Well in writing to a consumer, in order to be truthful and complete you would recommend, wouldn't you, that at a minimum the tobacco company in this case state that while there is no cause-and-effect relationship, a statistical association has been shown or there's a linkage?

A. 1990 you've got surgeon general's warnings, you don't have to augment that. Basically this is somebody writing and complaining about the Joe Camel campaign. My hunch is that they're not writing to a smoker anyway.

Q. Would the statement that "scientists don't know the cause or causes of chronic diseases reported to be associated with smoking" have a tendency and reason to affect this person's risk perceptions about smoking?

A. I don't see why it should.

Q. No affect.

A. No affect.

Q. Because?

A. The information's already out there through the hazard warnings, and con -- and consumers have no incentive to process favorable information if provided costlessly by a company. In this case the

person providing the information is a woman in the public relations department of the cigarette company. There are no costs to her of any statement she makes.

Q. And by "cost to her" what you mean is she could lie and it wouldn't cost her anything.

A. That's correct. There's not a guarantee or a warranty type relationship here.

Q. And so there's no incentive, because of the absence of cost, for this person writing this letter to tell the truth.

A. The consumer will perceive that there's no incentive for the person to tell the truth, and because of that the consumer will not place any credibility on this claim any more than a claim if a Whirlpool manufacturer wrote to a consumer and said our dishwashers really are the best. There's no reason to place any weight on that claim.

Q. Is there any incentive for the public relations representative in the last example we've been talking about, to tell the truth?

A. There might be private incentives from the standpoint of the company, but in general even if it's a company there are not substantial costs associated with these statements irrespective of

whether they're true, in the same manner as there would be with guarantees or warranties. So if, for example, somebody from R.J. Reynolds wrote and said "cigarettes unfortunately cause flat feet," which we know is not true, there'd be no sanctions. There's no cost really to that so that there's no reason to believe such statements. Quality claims about products generally are not viewed as effective in the economics literature.

Q. So there's no reason for the recipient of this letter to have believed what he was told; right?

A. I don't think --

Q. Because there's no cost associated with it.

A. I don't think the recipient placed a lot of weight on this letter from the PR person in a firm. This is, you know, you're -- you're obliged to respond to the people that write in, you crank out a letter back. This is not something that people at the receiving end view as a major event in their lives in terms of how they think about a particular product.

Q. If the same point of view as expressed in this letter was expressed by the chairman of RJR, would you have the same point of view?

A. Yes.

Q. So even if the chairman had written this letter to this individual there would be no reason for this individual who received the letter to place any stock in it or believe it in any respect because there's no cost associated with lying.

A. And what did they say? All they said is that the cause is not nailed down. There's research going on. I don't see where there's any real information here.

Q. So it's useless.

A. I don't regard it as useful. I don't think a scientific committee could take this and formulate a risk assessment based on this.

Q. So if the chairman of RJR in about the same time frame had said fundamentally the same thing, you would analyze his behavior the same way, that is to say, there's no cost associated with lying, so he might well lie.

A. Well, and the statement itself is pretty vacuous so I don't see this as being a strong statement one way or the other.

Q. Have you seen anywhere -- Well, let me back up.

The documents I've shown you up to now, today's the first time you've ever seen these documents. Isn't that true?

A. I've seen the Frank Statement before.
Q. Other than the Frank Statement.
A. Yes.
Q. Have you seen any documents from any tobacco company that relate to what they knew about whether nicotine or cigarettes were addictive?
A. No.
Q. Have you read any reports that discuss the fact that certain cigarette companies knew nicotine was addictive?
A. Just your complaint in the case or whatever it's called, your charge.
Q. Umm-hmm.
A. And newspaper articles, and that's it.
Q. Have you ever tested in any of your risk assessment work on smoking, whether people have a belief, the public does, about whether nicotine or cigarette smoking is addictive?
A. I've not.
Q. Do you know anybody who has?
A. No.
Q. Do you know of any literature that has tried to assess that question?
A. I know people have explored it. I'm not sure whether that's how I'd even phrase it from an

interview standpoint, whether I'd even want to approach it that way.

Q. How would you phrase the question?

A. "Do you know smoking's hard to quit?"

Q. Why wouldn't you ask the question "do you know if smoking is addictive?"

A. Then you get into a debate over, well, I don't think it's addictive, I think it's habituative. What do I mean by that? And people don't understand specific medical terminology that has a well defined meaning to the medical community but does not have as well defined a meaning to the public at large.

Q. Wouldn't you have the same problem with the question that you posed; that is, "what do you mean by hard to quit?"

A. "Hard to quit" is easier to understand than "addiction," which carries along with it more excess baggage in terms of what it means and why that's different than habituation. I think I'd be hard pressed to find many people who could tell me the difference between addiction and habituation.

Q. Do you know the difference?

A. The difference as I understand it is that addiction involves physiological effects as opposed to just liking something.

Q. Or psychological effects.
A. Or psychological effects.
Q. Do you regard the use of heroin as being an addiction?
A. That's what I've been told, but I have no independent knowledge of that.
Q. How about the use of cocaine?
A. Once again I think in the popular press that cocaine has been classified as addictive.
Q. How about alcohol?
A. People have called alcohol an addictive drug. I think that's a mistake in terms of how you would want people to think about alcohol, but yes, it's been classified as an addictive drug.
Q. Do you accept as true in your own assessment of these things that cocaine and heroin are addictive?
A. Yes.
Q. You disagree about alcohol?
A. No, I don't disagree with how the medical community chooses to label it.
Q. Okay.
A. I just think society's interests are not well served by placing alcohol in the same category as heroin.
Q. Why is that?

A. Well, when high school and college students are thinking of what they're going to do this weekend for party night on Friday night or Saturday night, I'd prefer them to be having a beer rather than thinking they could substitute heroin as an equally risky product.

Q. And you think the use of the word "addiction" connotes something about the risk of the activity?

A. It places it in the same category as heroin, so calling something an addictive drug immediately raises specters of heroin and cocaine.

Q. And there are obviously health effects associated with those two products.

A. Well people can't function in a normal way, typically, if they're addicted to those drugs.

Q. In order to give people accurate risk perceptions about smoking, wouldn't it benefit the cause of lowering the incidence and thereby lowering the incidence of disease, to call cigarette smoking an addiction?

A. My goal is not to benefit the cause of lowering disease, my goal is to benefit the cause of promoting consumers' welfare based on the truth. That may involve less smoking, it might not.

The danger of calling cigarettes addictive, and

I realize that there will probably be warnings on cigarettes in a year or so that do that, is that you place smoking in the same classification as heroin and cocaine so that it may dilute our efforts to combat these other products.

Q. But calling it addictive may well have a salutary effect of reducing the amount of smoking and thereby inferentially, indirectly later on reducing the amount of disease from smoking; right?

A. I don't think how people will process the word addictive, but if it -- but if it misleads them into thinking that smoking is as bad as heroin in some sense then I don't think that that's a good thing.

Q. Well is it as bad as heroin, smoking?

A. I would rather have a coworker or a doctor operating on me who's a cigarette smoker than who is a heroin addict. I don't think there's any question whatsoever.

Q. In terms of the lifetime risks in your personal life, would you make a choice between the two?

A. I don't know what the lifetime risks are. I do know that if you're a heroin addict you're not going to be as functioning a member of society as you will be if you're a cigarette smoker. You're less at risk from being killed on the street by a cigarette smoker

than you would be by a crack addict, for example. Cigarette smokers don't rob you to get money to support their habit.

Q. You're talking about the societal effects. What about the personal effect on the individual? Are they at least as severe for cigarette smoking as they are for heroin or cocaine?

A. No, because heroin and cocaine make you stop being a functioning, productive member of society, smoking does not.

Q. I'm talking about in terms of disease.

A. I don't know what the disease implications of heroin are, but the fact that you're even high on heroin has harmful morbidity consequences in terms of you being able to function in a healthy manner, so simply using the product will affect your ability to act as a normal, healthy human being.

Q. Do you have a sense from your smoking research as to what the American public's view is about whether cigarettes are either habit forming or dependence producing or addictive?

A. I haven't done separate survey work on the class of issues you refer to.

Q. Do you have an impression based on that work?

A. I haven't done the work, so I haven't done work

on quitting in terms of explicit survey questions. I have thoughts that I've written up but --

Q. Well you have an impression certainly that cigarette smoking is hard to quit.

A. Certainly. I think that's well known.

Q. And what's the basis of that?

A. Common knowledge. This is public knowledge. This is why we have Smoke Enders. Everybody knows smoking's hard to quit. I mean, this is not a state secret.

Q. Do you have an impression as to whether people overassess, underassess or assess just right how hard it is to quit smoking?

A. No. I don't have that kind of pinpoint evidence on this topic.

Q. To the extent there's a controversy about whether or not smoking is addictive, dependence producing or habit forming, do you believe that what the companies know over time about that subject, or what they believe, would be useful to the public in making its own judgements about whether smoking is habit forming, dependence producing or addictive?

A. No, I think this is a very specialized debate that's primarily of interest to the medical community and the specialists in the field. From the

standpoint of the public, all they need to know and what they do know is that quitting smoking is hard to do, and how you change the label of this over time really is not that important to that basic fact. Now if you mislabel smoking in a way that makes them think smoking is like heroin that could have detrimental consequences, in part for our other programs, antidrug programs.

Q. From a societal standpoint wouldn't you want to just leave it to the public to decide what's good or bad for them? That's your view, isn't it?

A. I let people themselves choose, once we've informed them.

Q. Yeah. You want to give them all the information, let them make the decision; right?

A. Yes, but it has to be operational information. If the public could comprehend technical information we'd mail them all articles from New England Journal of Medicine and tell them to figure it out. In the same way, they don't understand the nuances between addiction and habituation.

Q. So who's to decide what information is given to the public about the health -- not the health effects but the habituating effects, dependence-producing effects, addictive effects of cigarettes?

A. Well the first thing you'd want to do before anybody would even think of doing this is to identify an information shortfall, and I can't think of any. Everybody knows that quitting smoking is hard to do. I don't see what the information gap is.

Q. What do the people of this country think is the reason that it's hard to quit?

A. Because you like cigarettes, you enjoy smoking it, and it's hard to give them up.

Q. Psychologically, socially or physiologically, or all of them?

A. I don't have any data on what everybody thinks so I'm not going to speculate on what's going through people's heads as to the mechanism. I just know that they know about the outcome.

Q. In assessing the meaning of the outcome, it would be important to know why cigarettes are hard to quit, wouldn't it?

A. Not to economists. We just care about the fact that they recognize that there's a cost to altering your behavior. Where this cost came from is not important.

Q. I wasn't talking about economists, I was talking about the public.

A. I'm talking about me. You're asking me what I

think.

Q. Wouldn't it be useful to the public to know why it's hard to quit?

A. I don't think the public has to understand mechanisms so long as they understand costs to change.

Q. It would be important to know the mechanism of why smoking causes cancer; right?

A. No, it isn't. I don't really care.

Q. It's not important?

A. Not to me.

Q. Not to the public?

A. It may be important to the medical community, but to me it's not important. If smoking causes cancer, exactly why it causes cancer is not essential for me to know.

Q. If the tobacco companies have information about nicotine being addictive, would the public disclosure of that information over time have assisted the public in any way in assessing how hard it is to quit smoking?

A. Well since they already knew it's hard to quit, since simply labeling something addictive just reinforces what they already know, that doesn't shift their beliefs, and saying that mice kept on going

back and drinking from the nicotine water or whatever it is they did doesn't enable the public to form any better judgment than they have already.

Q. Did the public's understanding about how hard it is to quit cigarettes go from knowing nothing to knowing everything in one step?

A. I think it's been common knowledge for years. I don't know when it ever began, just like "coffin nails," that expression's been used long before 1964.

Q. Referring to cigarettes.

A. Referring to cigarettes.

Q. Did the information about the addictive or dependence-producing properties of cigarettes evolve over time?

A. I know of no time when people did not know that smoking was hard to quit. I certainly know in the 1950s that was well known. But I was not alive long enough before that to know what was common knowledge before the 1950s.

Q. To the extent that cigarette companies in a series of documents acknowledged that nicotine is addictive and that smoking is an addiction, do you believe that the release publicly of that type of information would be at all interesting to the public?

A. Once again, it's not new information, the public already knows that smoking is hard to quit. This is information that is primarily of interest to a narrow group in the medical community that wants to know whether they want to classify it as an addiction or as an habituation, and that may be of professional interest but that's not going to be something the public at large cares about.

Q. How do you know they don't care?

A. They don't even know the meaning of those two terms, so making fine distinctions between them is not going to be something that they would care about.

Q. If there is a controversy in the 1960s that says on the one hand cigarette smoking is merely habit forming, like drinking coffee or Coca-Cola or eating chocolate, and on the other hand that it's addictive, powerfully so, wouldn't information that helps resolve that controversy be helpful to the American people?

A. As we've defined addiction for this deposition, Coca-Cola and coffee would also be addictive in that people do have physical effects from stopping the use of them, so that this is a fairly broad term, and I don't see where telling people that it's going to be in the same class as Coca-Cola would convey any

stronger information about it than they have already.
Q. Would it be helpful to the American people to know that nicotine causes central nervous system effects?
A. Which is to say it makes you jittery, to smoke, or maybe calms your nerves, either one. I don't think those are new things. Coffee makes people jittery, Coca-Cola makes me jittery. That's a central nervous system effect. So that's not a scary notion to me, at least in terms of medical information you could provide so --
Q. I wasn't suggesting it was either scary or comforting.
A. I'm not -- I don't see where that's a risk. That's just an effect of the product, and if it's not something adverse, why bother telling people?
Q. What if it's explanatory in terms of their continued smoking behavior, would that be useful for them to know?
A. I don't see why.
Q. It wouldn't be helpful to them to know at least one explanation for why they continue to smoke?
A. Well the reason you smoke is because your body likes it. You going to tell people that? I'm not sure exactly how you're going to couch this.

Q. Tell them that nicotine has an effect in the brain that causes a physiological dependence. Would that be helpful?

A. No, I don't see where this is going to affect anything.

Q. And the reason is everybody knows it's hard to quit.

A. They know it's hard to quit and what the mechanism is is unimportant to the outcome.

(Luncheon recess taken at approximately 11:58 p.m.)

AFTERNOON SESSION

(Deposition reconvened at approximately 1:03 p.m.)

BY MR. SILBERFELD:

Q. I'd like to mark as next in order a document bearing Bates number MNAT 00639587.

(Discussion off the record.)

Q. This is a press release from the Tobacco Institute in 1988. Do you see that?

A. Yes.

Q. And it bears the heading, "CLAIMS THAT CIGARETTES ARE ADDICTIVE CONTRADICT COMMON SENSE." You see that?

A. Yes.

Q. As of 1988, do you believe that to have been a truthful statement?

A. I believe that people can quit cigarettes, and to the extent that people think the word "addictive" means that they can't quit cigarettes, that would not be true, as they point out in this statement that smoking is a personal choice and you can stop if you choose to do so. I believe that statement.

Q. Does it contradict common sense to say cigarettes are addictive?

A. Yes, because it places cigarettes in the same

category as heroin use, as they point out. And for the general public, when they're thinking of addiction, they're thinking of these hard drugs.

Q. As of 1988, was it true that smoking causes a physical dependence at some level?

A. I believe it is true. I'm not sure what the evidence was.

Q. Would you regard the statement in the second-to-the-last paragraph, "the claim that cigarette smoking causes physical dependence is simply an unproven attempt," to be a truthful statement?

A. It seems to me that they're trying to distinguish smoking from heroin and other products, so to say that you like cigarettes in much the same way as I like Coca-Cola, some people like coffee, is different than saying that you have a physical dependence in the same way that a heroin addict has.

Q. Is it a truthful statement?

A. The issue is not whether it's truthful, but whether it's unproven.

Q. Is the fact that they say it's unproven a truthful statement as of 1988?

A. I don't know what was proven in the medical literature.

Q. If that was --
A. I did know that people themselves thought that quitting smoking was hard to do, and that's a physical thing.
Q. If that was a false statement as of 1988, that would have a tendency to mislead people who heard it or saw it. Isn't that true?
A. No, this is in the context of saying that smoking's not like drug addiction such as cocaine and heroin, and the physical dependence is not of that character.
Q. Assume for purposes of my question that it is addictive. Is the statement that it's not addictive likely to mislead the American public in its beliefs about whether or not smoking is addictive?
A. No, because to the extent that people view the label addictive as putting it in the same class as crack or heroin, I believe that that categorization does more to mislead the public than saying it does not belong in that same category.
Q. Have you heard of tobacco industry positions that they do not market their products to children?
A. I have heard news accounts saying that.
Q. Have you spoken to any lawyer for any company or talked it any tobacco company executives where the

subject of whether or not they market their products to children has come up?

A. No.

Q. Do you have a belief as to whether or not cigarette companies market their products to children?

A. Yes.

Q. What's your belief?

A. I believe they do not.

Q. What's that based on?

A. I don't see any ads on the Saturday morning TV shows advertising cigarettes, I don't see cigarettes being sold at Toys-R-Us, so I have no belief that cigarette companies would violate legal restrictions pertaining to smoking ages. I've never seen cigarette companies ever urging people to violate legal requirements regarding the age of purchase of cigarettes. And I've never heard of any example that the cigarette companies opposed such legal requirements.

Q. Is the availability of cigarettes, for example, in or around high schools a factor to consider in determining whether or not the products are marketed to children? "Children" being anybody under the legal age.

A. Near high schools there are often convenience stores, convenience stores stock a range of products, that range would include cigarettes, but I don't think you can require that convenience stores limit their product mix just because they happen to be near a high school.

Q. That would be a bad idea?

A. I think it would be a bad idea because you're penalizing them from selling to adults who would come into their store. The fact that they happen to be a store near a high school should not affect the range of products they're allowed to offer.

Q. In the studies you've done about risk perception, what age groups have you looked at?

A. Sixteen and above and 18 and above.

Q. So 16 to 18 and 18 --

A. No, 16 to 21 or so, whatever that age group is, I could look it up, 18 through the early '20s as well would be another group.

Q. Okay. For sake of convenience, let's just say 16 to 18 is one group and 18 to 21 is another.

A. Different studies, so one was --

Q. No, I understand.

A. I think one was like 16 -- Let's do 16 to 21 and 18 to 21.

Q. Okay. And what conclusion did you reach about risk perception within that band of ranges, that is to say, did the 16 year olds perceive the risks of smoking differently than the 17, 18, 19 or 20 year olds?

A. I don't have data for the exact age. I know where the range is, and generally what I found is that the youngest age group in the cohort or in the sample had the highest risk perceptions.

Q. "Youngest" being the 16 year olds?

A. That group had a higher risk belief than, let's say, 45 year olds or 60 year olds.

Q. Did the 16 year olds have a higher risk perception than the 20 year olds?

A. I think it was only broken up into a few age brackets, but I believe it was the -- I'm sure it was the highest risk perception in the sample, the 16 year olds.

Q. Is this in the book?

A. It's all in the book.

Q. Can you find it for me? Do you have the book with you?

A. It's in the book on page 123.

Q. What does it say?

A. Sixteen year olds on average, 16 to 21 year olds

on average believe the lung cancer risk from cigarettes is 49 percent, and it drops to 42 percent for the older age groups.

Q. Do you report any statistics within the 16 to 20-year-old age group?

A. No.

Q. From your work in that area, do you have an impression in your mind as to whether or not there is a difference in risk perception between a 16 year old and a 20-year-old?

A. I don't have data on that.

Q. What's your belief?

A. I don't have a prior except to the extent that since we observe an increase in risk perceptions as we move to the younger age groups, I would expect 16 year olds to have a higher risk belief than 21 year olds.

Q. By an appreciable margin?

A. I believe so, because in the subsequent study when we included age groups starting only at age 18 I don't think there was as stark a difference in the youngest age group, so I think we do get an extra kick out of the 16 and 17 year olds in terms of higher risk beliefs.

Q. To the extent that a tobacco firm tracked

smoking habits of people under the age of 18, would that lead you to any conclusion as to whether or not they were marketing their products or designing their products to appeal to people under the age of 18?

A. No, they may be simply tracking it to have information with respect to government regulation. To what extent are -- for example, are the smoking restrictions effective. They may want to simply know that answer.

Q. So they would want to study people under 18 and their smoking habits in order to find out whether the restrictions on sale were working.

A. That's correct, and you could see which states they were seen to work the best. That's one of the reasons you could study it.

Q. What's another reason?

A. Just general curiosity as to who your consumer mix is. You want to know who's out there using your product.

Q. And how about who your current customer is?

A. That's a different label for consumers.

Q. And how about who your future customer is?

A. We don't know that a 16 year old or a 15 year old who has a cigarette, first of all, is a customer that purchased or would be a continuing smoker.

Q. Do you know the statistics of the number of people or the percentage of people who habitually smoke who started before the age of 18?
A. I don't know that percentage.
Q. Do you regard underage smoking in America to be a significant problem?
A. I don't know how prevalent it is, but it's not something I support so I would view it as a problem. It's not a desirable thing.
Q. Why is it undesirable?
A. If they're underage then they're smoking in a situation where they're violating the legal guidelines we've set up, so ideally we like people in society to adhere to the guidelines.
Q. Is that the only reason, that they're violating the law?
A. Well, as I indicated in my book with respect to that, there are a lot of decisions that we reserve for people to make until they're older, whether it's voting, or seeing R-rated movies, or driving a car, so to the extent that we want people to wait until they're adults to make important risky choices then that would be the same thing with respect to smoking.
Q. And the reason conceptually that we want them to wait to make risky choices is that that time line

about adult hood suggests or infers that decisions made before that time about risky matters may be flawed.

A. Well it's noteworthy in my case, I was not able to find any evidence of flawed behavior through the 16 and 17 year old age range so I don't base it on evidence of flaws, but at least in terms of consistence if we're going to make R-rated movies something you wait for, I would put smoking certainly in the same league and would reserve that choice as well until that age.

Q. Based on your risk-perception data, the youngest age group, 16 year olds let's say, has the highest risk perception of any group.

A. Sixteen to 21 year olds have the highest risk perceptions. And my inference, based on the recent survey of 18 and above, would be that 16 and 17 were probably a higher risk perception than 18 and 19, but I don't know that for sure.

Q. Given the fact that they have a higher risk perception than the older age groups, would you support lowering the legal age for making tobacco products available to, say, 16?

A. Well as I indicated in the book, the fact that they might make -- be making mistaken decisions at 16

and 17 was something that we had no evidence that that was the case.

Q. Right.

A. However, I saw no reason why we shouldn't be consistent across the board in reserving important -- important individual choices until the age of 18. So I was willing to let people wait to smoke until they're 18 just like I'm willing to wait and let them see an R-rated movie, or drink. Of course that's 21 now.

Q. In terms of danger to the individual, you regard smoking as being in the same league with seeing an R-rated movie?

A. No, but I'm saying that there are certain things, whether it's R-rated movies or driving a car, voting, joining the army, all these are decisions that we say that you can't make at the age of 9, for example.

Q. And smoking ought to be one of those?

A. Smoking is a decision that has important consequences for your life and I want to reserve that for a group that we would designate as adults.

Q. From a purely risk-perception standpoint, however, there would be no negative consequence or cost, apparently, from lowering the age at which

cigarettes are available to 16; right?
A. We don't know that 16 year olds are making bad decisions, but we don't know everything about those decisions either. So this doesn't indicate everything is fully rational at age 16, what it indicates is I don't have any problems that I've identified at age 16.
Q. Based on the absence of those problems, lowering the age to 16 and making cigarettes available to 16 year olds would not result in any societal cost; right?
A. Well we don't have evidence on the problems, so since we have not shown that people can make reliable decisions with respect to smoking at age 16 on all dimensions, you wouldn't want to do that until you had more evidence, given the fact that you've made a decisions in a lot of other domains which are less harmful such as R-rated movies, to not let people do that at age 16.
MR. SILBERFELD: Let me mark as next in order a three-page document that bears Bates stamp number 170052238 through 40.
(Plaintiffs' Exhibit 3821 marked for identification.)
BY MR. SILBERFELD:

Q. This is a Brown & Williamson document, Mr. Viscusi, bears the date of 1973. Do you see that?
A. Yes, I do.
Q. At the bottom of the first page it's talking about the market penetration of Kool cigarettes. Do you see that?
A. That's correct.
Q. And it talks about little or no growth in the share of users in the 26 age group. Growth is from 16 to 25. Do you see that?
A. That's correct.
Q. Take a look at the third page, under the paragraph marked 3. It says, "Kool's stake in the 16 - 25 year old population segment is such that the value of this audience should be accurately weighted and reflected in current media programs. As a result, all magazines will be reviewed to see how efficiently they reached this group and other groups as well." You see that?
A. I do.
Q. Does advertising to 16 year olds of cigarette products violate the law as it existed in 1973?
MR. ATKESON: Objection, calls for a legal conclusion.
Q. Go ahead.

A. I certainly don't know what the law was. Second, I don't know whether purchase of cigarettes by 16 year olds was legal in the state of Kentucky in 1973. Third, they're not advertising to 16 year olds, they're advertising to a 16 to 25 year old age band. Fourth, advertising primarily affects product choice, not whether you consume a particular product, so to the extent you're only shifting market shares there's no effect on smoking behavior.

Q. So here what you're saying is they're advertising to 16, 17, and 18 year olds, among others, to get them to switch brands, not to start.

A. I'm saying that's what advertising does. What their intent is is irrelevant, but that's what advertising does from an economic standpoint.

Q. Have you ever seen this document before?

A. Never.

Q. To the extent that Brown & Williamson -- Let me withdraw that.

What is your conclusion that this is Kentucky specific?

A. Well it includes Kentucky, and since it's written from Louisville, Kentucky, the question is was smoking illegal in the United States for 16 and 17 year olds in 1973. I would want to know that

answer before we start pursuing all these other judgements you wanted me to make.

Q. You did some historical analysis of advertising in the cigarette industry for the book; right?

A. I've looked at old ads.

Q. Did you find that cigarette companies did their advertising buys and designed their programs on a state-by-state basis, or did they do that nationally?

A. I did not examine where they purchased ads, I only looked at ads themselves that appeared in publications such as Saturday Evening Post.

Q. To the extent that firms do business nationally, it's your experience, is it not, that they do their advertising and design of their advertising on a national basis?

A. No, they may target their ads regionally, so if you're going to sell winter coats, you'd want more ads in Minneapolis than you would in Orlando.

Q. You don't sell winter coats nationally; right?

A. You don't?

Q. You do?

A. Ralph Lauren's winter coats, he advertises his winter coat line more in Minneapolis than he would in Orlando. They're in the New York City magazine because that's cold. I'm sure they're not in the

magazine section of the Orlando Sentinel because that's a warm climate.

Q. You don't know whether this is a national program or not?

A. No, I just know it's written out of Louisville.

Q. And therefore you conclude it's only about Louisville.

A. That's just one example, but at the time it was not -- I had no knowledge that smoking was illegal for 16 year olds in Louisville in 1973. It may have been.

MR. McGAAN: Let me mark as next in order two pages of a multipage document, and Tim, if you want me to mark the whole thing, I'm pleased to do it.

MR. ATKESON: No, that's okay. On that previous one the pages were out of order within what you gave us. That was the only problem.

MR. SILBERFELD: What I'm telling you now is that I've intentionally only copied two pages --

MR. ATKESON: That's fine.

MR. SILBERFELD: -- in the interest of saving trees. This -- The whole document bears Bates numbers 680116947 through and including 968. The two pages of which I'd like to mark --

MR. ATKESON: Sure.

MR. SILBERFELD: -- is 680116947 and 959.

MR. ATKESON: And I'm assuming we can tell the context of what's going on from the two pages?

MR. SILBERFELD: Yeah. Because I only have one question about one part of it.

(Plaintiffs' Exhibit 3822 marked for identification.)

BY MR. SILBERFELD:

Q. Mr. Viscusi, the two pages are a "Viceroy Agency Orientation Outline," that's for the Viceroy brand of cigarettes. I'll represent to you it's a Brown & Williamson document. If you would, turn to the second of the two pages you have. It refers in section 4 there, "VICEROY Marketing Information for 1976." Do you see that?

A. That's correct.

Q. And the target audience here is males 16 to 35. Do you see that?

A. Yes, I do.

Q. Does that lead you to conclude that Brown & Williamson was designing its advertising for males age 16 to 35 in this year?

A. It just says that that's one target audience. That's a fairly broad group, 19 years, 20 years.

Q. Does that suggest that the impact of advertising is the same across that entire age group; whatever the impact is, it's the same?

A. No, could be different.

Q. Or do you know?

A. We don't know, that's why it might be the same, it might be different. We don't know how different people within it would be affected, we don't know what information they have, where the ads appear.

Q. In terms of your view that cigarette smoking should be reserved for adults or people who reach 18, do you believe that cigarette companies should not target people under the age of 18 as the base of their business?

A. Well there are three critical age levels for, quote, adult hood. Age 16, which is when you can drive; age 18, which is when you can get into R-rated movies; and age 21 when you can do lots of other things. I think there's somewhat of an arbitrary distinction across those. I had no firm reason for setting it at 18 other than that seemed to be a focal point of discussions at the time, so one of the questions I want to have answered before I explore this memo would be whether smoking among 16 and 17 year olds was legal in any state in 1976.

Q. And if it was you'd have no problem with it?
A. They're complying with the law.
Q. You'd have no problem with it.
A. It's part of the age band of people in their legal market, and if society's decided age 16 is okay, I would have no problem with that.
Q. In terms of what was known in the decade of the 1970s about the potential health effects or the probabilistic health effects of cigarette smoking, would it be appropriate, in your view, to design a marketing program that targeted the high school student as the base of a company's business?
A. That's not what this is. Age -- Males --
Q. I'm past that. I'm asking you a different question.
A. Well high school students are 14 year olds and 15 year olds, and if age 16 is the legal cutoff it would not be appropriate to target people below that level.
Q. Let me show you another document, consists of two pages, 03537131 and 2.

(Plaintiffs' Exhibit 3823 marked for identification.)

BY MR. SILBERFELD:
Q. This is a Lorillard document, I'll represent to

you, from 1978. If you take a look at the third paragraph, it reads, "The success of NEWPORT has been fantastic during the past few years. Our profile taken locally shows this brand being purchased by black people (all ages), young adults (usually college age), but the base of our business is the high school student." Do you see that?

A. Yes.

Q. Can you see any justification whatsoever for a tobacco company having the base of their business be the high school student?

A. Seniors in high school are often 18. Depends on what the cutoff is for legal smoking.

Q. So if the legal age is 18, then the base of the business being the high school student should exclude the 14, 15, 16 and 17 year old; right?

A. A lot of high school students are 18 in high school. Those, depending on the cycle of the age group.

Q. And that's what you think this refers to?

A. It could be 17 year olds and 16 year olds. I don't know what the legal age for smoking was at the time, but the fact that you're picking up some high school students does not necessarily imply that you're violating any age restrictions that were in

place in that time.

Q. Okay. In order to do the consulting work that you do that is unrelated to your research work, do you have to have the permission of your institution?

A. No.

Q. Did you have to have the permission of Duke when you were there?

A. No.

Q. When you do work of a consulting nature, do you perform conflict checks?

A. I'm not sure what you mean. Do I ask the university if they have an investment in the company? I have no investments, so I have no conflicts and I file a no-conflict-of-interest statement.

Q. With the university.

A. With the university.

Q. That's really what I'm referring to. So that the university will know whether there are any conflicts between the university on the one hand and you and whatever you might be doing; right?

A. They would know that.

Q. Have you done that with respect to your work on this, filed conflict forms?

A. I've not been asked by Harvard Law School to

file a list of my clients, however I have informed the Dean of my law school that I was giving depositions on behalf of the tobacco industry.

Q. And you specifically named the tobacco companies?

A. I said "on behalf of the tobacco industry." I did not name the particular companies. I didn't think he cared. I had dinner with him, he didn't inquire which companies. He also knows I've been doing extensive work in this area, I've been quoted in the media on this topic, and so it's not a secret at all.

Q. I'm not suggesting it's a secret.

Have you filed any formal conflict forms with respect to your consulting work in tobacco litigation?

A. There are no conflicts.

Q. Have you filed any forms?

A. No, there are no forms to file. Harvard doesn't have any forms for me to file on this. I file my annual report on my consulting activities. That does not require that I list my clients. I have discussed my clients and indicated the nature of my activity to my dean, who is the top official of my school.

Q. And you've told him that the consulting work is

for and on behalf of tobacco companies as distinguished from the lawyers?

A. I testified on behalf of the tobacco side in the litigation in the state cases. He can interpret that, I think, in a reasonable way. He's a law professor and dean of the law school. I think he's pretty sophisticated.

Q. That's what you told him.

A. I didn't tell him he was sophisticated, but I did tell him that I was testifying in deposition and I even told him the nature of the deposition and we discussed what happened during the deposition, so I gave him an entire post mortem, as I perceived it, on the Mississippi deposition the day I did it. I had dinner with him that evening.

MR. SILBERFELD: That's all I have, subject to the -- the issue of the disk.

MR. ATKESON: Okay.

MR. SILBERFELD: I'm not going to conclude the deposition, I'm going to adjourn it. We'll make a decision about how to approach the topic of the -- the disk, whether that's by way of a separate motion or an ex parte application, but we'll both inform you and local counsel here about that, and then to the extent we get an order that that be produced, we'll

use the remaining time on that subject if and when we get there.

MR. ATKESON: I take it, then, that there are no other subjects.

MR. SILBERFELD: There are no other subjects other than those that relate directly or indirectly to the disk.

MR. ATKESON: And that would just be -- Because in the article he's given you and in the Florida calculations he's laid out a series of formulas. That would just be any Minnesota-specific adjustments or calculations he made?

MR. SILBERFELD: It's probably broader than that, Tim, it's probably about that page of his report. It's not about risk perception, and it's not about market share, I'll give you that much. But it's certainly about the methodology, whether that gets general or specific.

MR. ATKESON: I just want to be clear that you're free today or were free yesterday to ask him anything you want about the Florida calculations that you already have, anything that was in that April 10th article, anything about how he takes Manning as a starting point, works that into an updated national number and then generically how he would go about

moving that to a state number. You were free to do that. Is that fair? I mean, I just want to make clear --

MR. SILBERFELD: No, it's not fair, but I accept what you say. I understand what you're saying, and what I'm saying is that without the program and without the ability to run it we're not through with our examination on this subject. I'll conclude the examination on the other two, but we're going to just adjourn the deposition as to that last topic.

(Deposition adjourned at approximately 1:43 p.m.)

C E R T I F I C A T E

I, Debby J. Campeau, hereby certify that I am qualified as a verbatim shorthand reporter; that I took in stenographic shorthand the testimony of W. KIP VISCUSI, Ph.D. at the time and place aforesaid; and that the foregoing transcript, Volume II, consisting of pages 261 - 419 is a true and correct, full and complete transcription of said shorthand notes, to the best of my ability.

Dated at Lino Lakes, Minnesota, this 18th day of September, 1997.

DEBBY J. CAMPEAU, RPR

Notary Public

S I G N A T U R E P A G E

I, W. KIP VISCUSI, Ph.D., the deponent, hereby certify that I have read the foregoing transcript, Volume II, consisting of pages 261 - 419, and that said transcript is a true and correct, full and complete transcription of my deposition, except per the attached corrections, if any.

(Please check one.)

____ Yes, changes were made per the attached

____ (#) Signature Page Addendums.

____ I have made no changes.

W. KIP VISCUSI, Ph.D.
Deponent

Sworn and subscribed to before me this day of , 199__.

Notary Public

My commission expires: (DJC)